SCIENTIFIC REFERENCE BR
Sci & Tech Inf Ctr
JUN 13 RECD
Pat. & T.M. Office

Access DB# 192785

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 6-13-06

Art Unit: 1782 Phone Number 30 2-1333 Serial Number: 10/679,367

Mail Box and Bldg/Room Location: 9C15 (Rem.) Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: PIZ. See Bib.

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

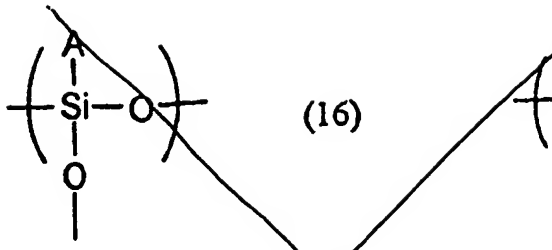
Please Search for the compound of Formula (1) in Cl. #7

(combined with "Photoacid generator" or "acid generating compound(s)" or "acid generator" or "PAG")

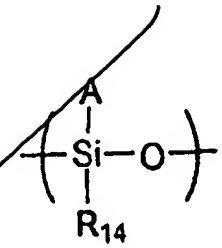
****

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: EL	NA Sequence (#)	STN
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 6-14-06	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time:	Other	Other (specify)

PTO-1590 (8-01)



(16)



(17)

wherein A individually represents a monovalent organic group having an acid-dissociable group and R_{14} represents a substituted or unsubstituted, linear, branched, or cyclic hydrocarbon group having 1-20 carbon atoms.

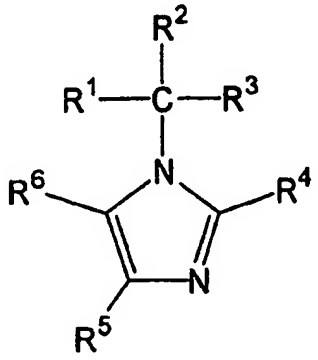
7. (Currently Amended) A radiation-sensitive resin composition comprising:

(A) compound shown by the following formula (1),

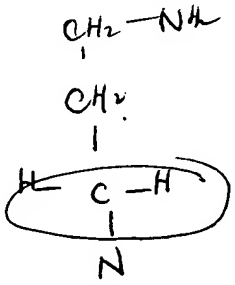
(B) a photoacid generator,

(D) an alkali-soluble resin, and

(E) a compound that can crosslink the alkali-soluble resin in the presence of an acid[[.]]



(1)



wherein R^1, R^2, R^3, R^4, R^5, and R^6 individually represent a hydrogen atom, cyano group, substituted or unsubstituted alkyl group having 1-20 carbon atoms, substituted or

unsubstituted alicyclic group having 3-20 carbon atoms, substituted or unsubstituted alkenyl group having 2-20 carbon atoms, substituted or unsubstituted aryl group, or substituted or unsubstituted heteroaryl group, provided that any two groups selected from R^1, R^2, R^3, R^4, R^5, and R^6 may be bonded together to form a ring which may comprise a hetero atom or may bond together to form a dimer.

8. (Original) The radiation-sensitive resin composition according to claim 7, wherein the photoacid generator (B) is at least one compound selected from the group consisting of onium salt compounds, sulfone compounds, sulfonate compounds, sulfonimide compounds, diazomethane compounds, disulfonylmethane compounds, and oximesulfonate compounds.

9. (Original) The radiation-sensitive resin composition according to claim 7, wherein the photoacid generator (B) is at least one compound selected from the group consisting of onium salt compounds and oximesulfonate compounds.

10. (Currently Amended) A positive tone radiation-sensitive resin composition comprising:

(A) a compound ~~The radiation-sensitive resin composition according to Claim 1, wherein the compound (A) is~~ selected from the group consisting of: 1-cyclohexylimidazole; 1-phenylimidazole; 1-naphtylimidazole; 1-anthrylimidazole; 1-norbornylimidazole; 1-adamantylimidazole; 1-(2'-hydroxyethyl) imidazole; 1-(3'-hydroxy-n-butyl) imidazole; 1-methoxyimidazole; 1-(2'-methyl-n-propoxy)imidazole; 1-cyanoimidazole; 1-(2'-cyanomethyl) imidazole; 1-methoxycarbonylimidazole; 1-ethoxycarbonylethoxyimidazole; 1-trifluoromethylimidazole; 1,2,4-trimethylimidazole; 1, 2, 4, 5-tetramethylimidazole; 1,2-dihexylimidazole; 1-ethyl-2-cyclohexylimidazole;

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Bib Data Sheet

CONFIRMATION NO. 4296

SERIAL NUMBER	FILING DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/679,367	10/07/2003 RULE	430	1752	5988-056-27

APPLICANTS

Kenichi Yokoyama, Tokyo, JAPAN;

Fumihisa Miyajima, Tokyo, JAPAN;
Tomoki Nagai, Tokyo, JAPAN;Eiji Yoneda, Tokyo, JAPAN;

** CONTINUING DATA **********
None SJL

** FOREIGN APPLICATIONS **********
JAPAN 2002-295260 10/08/2002 SJL

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 04/23/2004

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☑ yes ☐ no 35 USC 119 (a-d) conditions met ☐ yes ☑ no ☐ Met after Allowance Verified and Acknowledged Examiner's Signature SJL Initials	JAPAN	2	9	2

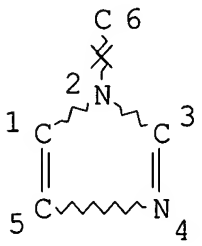
ADDRESS
Supervisor, Patent Prosecution Services
PIPER RUDNICK LLP
1200 Nineteenth Street, N.W.
Washington , DC
20036-2412

TITLE
Radiation-sensitive resin composition

FILING FEE RECEIVED	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time)

```
=> file reg
FILE 'REGISTRY' ENTERED AT 11:21:26 ON 14 JUN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)


=> d his

     FILE 'LREGISTRY' ENTERED AT 10:31:59 ON 14 JUN 2006
L1             STR

     FILE 'REGISTRY' ENTERED AT 10:32:56 ON 14 JUN 2006
L2            50 S L1
L3               SCR 1838
L4               SCR 1842
L5            50 S L1 AND L3 NOT L4
L6        277264 S L1 AND L3 NOT L4 FUL
                 SAV TEM L6 LEE367/A

     FILE 'HCAPLUS' ENTERED AT 10:55:07 ON 14 JUN 2006
L7         25316 S YOKOYAMA ?/AU
L8          4015 S MIYAJIMA ?/AU
L9         26205 S NAGAI ?/AU
L10            1 S L7 AND L8 AND L9
                 SEL L10 1 RN

     FILE 'REGISTRY' ENTERED AT 10:55:26 ON 14 JUN 2006
L11           22 S E1-E22
L12            4 S L11 AND L6
L13           18 S L11 NOT L12
L14            9 S L13 AND PMS/CI
L15            9 S L13 NOT L14
L16            5 S L15 AND (S OR I)/ELS

     FILE 'HCA' ENTERED AT 11:00:42 ON 14 JUN 2006
L17          617 S L12
L18       112835 S L6
L19         1822 S L16
L20        15561 S PAG OR PAGS OR P(W)A(W)G OR PHOTOACID? OR PHOTOGENERAT?
L21            1 S L17 AND (L19 OR L20)
L22           54 S L18 AND (L19 OR L20)
L23         2732 S L14
L24            4 S L22 AND L23

     FILE 'REGISTRY' ENTERED AT 11:05:19 ON 14 JUN 2006
L25        23865 S ?SULFONIUM?/CNS
L26         6284 S ?IODONIUM?/CNS
```

```
     FILE 'HCA' ENTERED AT 11:10:19 ON 14 JUN 2006
L27        22635 S L25 OR ?SULFONIUM? OR ?SULPHONIUM?
L28        11385 S L26 OR ?IODONIUM?
L29          835 S L18 AND (L27 OR L28)
L30       176319 S RESIST OR RESISTS OR PHOTORESIST? OR MASK? OR PHOTOMASK
L31           18 S L29 AND L30
L32            8 S L29 AND L20
L33            4 S L29 AND L23
L34           16 S L22 AND L30
L35        99191 S ((PHOTO OR LIGHT OR PHOTOLY?)(2A)(RX# OR RXN# OR REACT?
L36       110009 S ((ULTRAVIOLET? OR ULTRA(W)VIOLET? OR UV# OR SUV OR LUV
L37       179969 S (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM?
L38           25 S L22 AND (L35 OR L36 OR L37)
L39           10 S L21 OR L24 OR L32 OR L33
L40           18 S (L31 OR L34) NOT L39
L41           17 S L38 NOT (L39 OR L40)
L42           18 S L22 NOT (L39 OR L40 OR L41)
L43            8 S L39 AND 1840-2002/PY,PRY
L44           16 S L40 AND 1840-2002/PY,PRY
L45           15 S L41 AND 1840-2002/PY,PRY
L46           16 S L42 AND 1840-2002/PY,PRY

     FILE 'REGISTRY' ENTERED AT 11:21:26 ON 14 JUN 2006


=> d l6 que stat
L1              STR
```




```
NODE ATTRIBUTES:
NSPEC   IS RC     AT   6
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L3              SCR 1838
```

L4 SCR 1842
L6 277264 SEA FILE=REGISTRY SSS FUL L1 AND L3 NOT L4

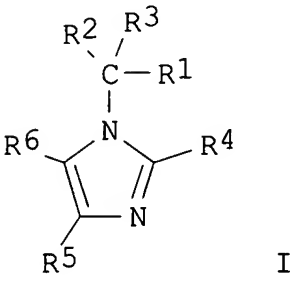
100.0% PROCESSED 630691 ITERATIONS 277264 ANSWERS
SEARCH TIME: 00.00.03

=> file hca
FILE 'HCA' ENTERED AT 11:21:48 ON 14 JUN 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l43 1-8 cbib abs hitstr hitind

L43 ANSWER 1 OF 8 HCA COPYRIGHT 2006 ACS on STN
140:383097 Positively-working radiation resist resin composition containing substituted imidazole. Yokoyama, Kenichi; Miyajima, Fumihisa; Nagai, Tomoki; Yoneda, Eiji (JSR Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004133055 A2 20040430, 40 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-295260 20021008.

GI



I

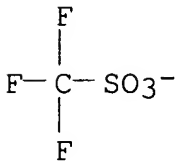
AB The compn. contains (A) N-substituted imidazole I [R1-R6 = H, cyano, (substituted) C1-20 alkyl, (substituted) C3-20 alicyclic group, C2-20 alkenyl, (substituted) aryl, (substituted) heteroaryl; 2 of R1-R6 may form heterocyclic group or form dimer], (B) a radiation-sensitive acid-generating agent, and (C) (c1) a resin insol. or difficult to be sol. in alkali protected by an acid-sensitive dissociable group, which is converted to alkali sol. in removal of the dissociable group or (c2) an alkali-sol. resin and an alkali dissoln. regulator. The storage-stable compn. shows high resoln.

IT **66003-78-9, Triphenylsulfonium** trifluoromethanesulfonate **84563-54-2,** Bis[4-(tert-butyl)phenyl)**iodonium** trifluoromethanesulfonate **138529-81-4,** Bis(cyclohexylsulfonyl)diazomethane **181425-38-7 209482-18-8**
(acid-generating agent; pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)

RN 66003-78-9 HCA
CN Sulfonium, triphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

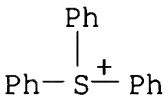
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

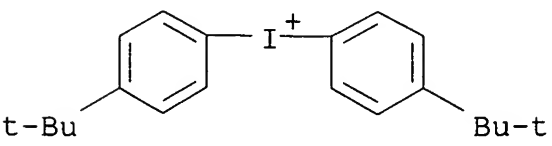
CRN 18393-55-0
CMF C18 H15 S



RN 84563-54-2 HCA
CN Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

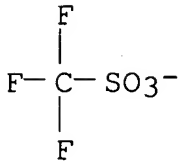
CM 1

CRN 61267-44-5
CMF C20 H26 I

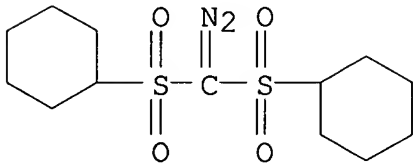


CM 2

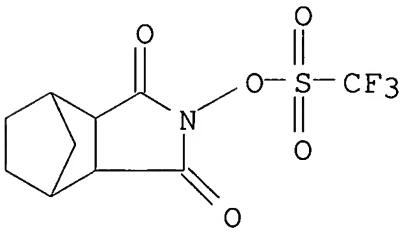
CRN 37181-39-8
CMF C F3 O3 S



RN 138529-81-4 HCA
CN Cyclohexane, 1,1'-[(diazomethylene)bis(sulfonyl)]bis- (9CI) (CA INDEX NAME)



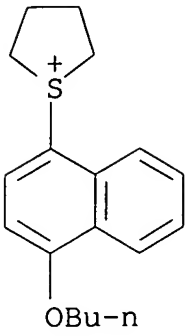
RN 181425-38-7 HCA
CN 4,7-Methano-1H-isoindole-1,3(2H)-dione, hexahydro-2-[[(trifluoromethyl)sulfonyl]oxy]- (9CI) (CA INDEX NAME)



RN 209482-18-8 HCA
CN Thiophenium, 1-(4-butoxy-1-naphthalenyl)tetrahydro-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 209482-14-4
CMF C18 H23 O S

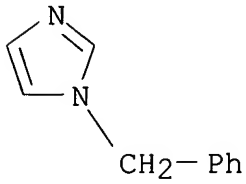


CM 2

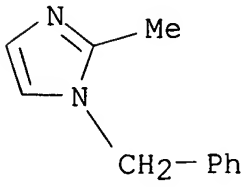
CRN 45187-15-3
CMF C4 F9 O3 S

$^{-}O_3S-(CF_2)_3-CF_3$

IT **4238-71-5,** 1-Benzylimidazole **13750-62-4,**
1-Benzyl-2-methylimidazole
(pos.-working radiation resist resin compn. contg. substituted imidazole prepd. from)
RN 4238-71-5 HCA
CN 1H-Imidazole, 1-(phenylmethyl)- (9CI) (CA INDEX NAME)



RN 13750-62-4 HCA
CN 1H-Imidazole, 2-methyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

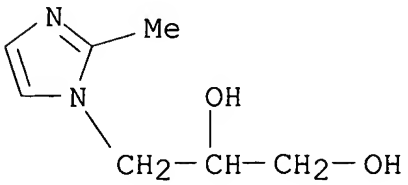


IT **683786-05-2P 683786-06-3P**

(pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)

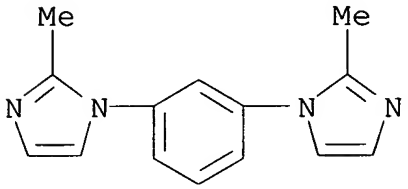
RN 683786-05-2 HCA

CN 1,2-Propanediol, 3-(2-methyl-1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



RN 683786-06-3 HCA

CN 1H-Imidazole, 1,1'-(1,3-phenylene)bis[2-methyl- (9CI) (CA INDEX NAME)



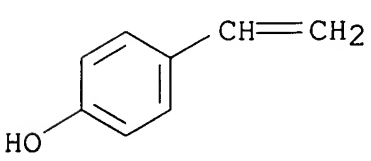
IT **24979-70-2DP**, Poly(p-hydroxystyrene), reaction product with di-Bu dicarbonate **123589-22-0DP**, p-(tert-Butoxy)styrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether **129674-22-2DP**, p-(tert-Butoxy)carbonyloxystyrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether **221549-67-3P 288622-95-7P 330576-44-8P 340964-24-1P 406198-64-9P 479628-09-6P**
(pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)

RN 24979-70-2 HCA

CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

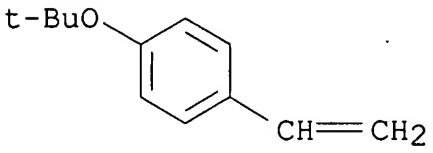
CRN 2628-17-3
CMF C8 H8 O



RN 123589-22-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

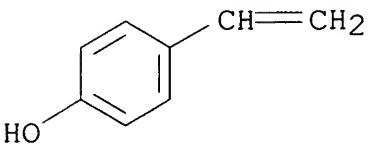
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

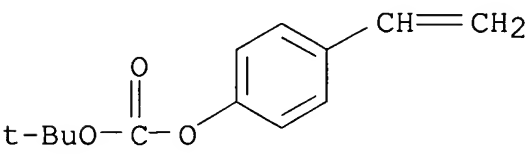
CRN 2628-17-3
CMF C8 H8 O



RN 129674-22-2 HCA
CN Carbonic acid, 1,1-dimethylethyl 4-ethenylphenyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

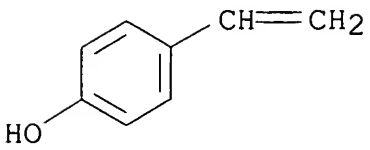
CRN 87188-51-0
CMF C13 H16 O3



CM 2

CRN 2628-17-3

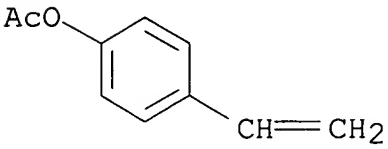
CMF C8 H8 O



RN 221549-67-3 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

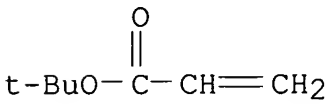
CM 1

CRN 2628-16-2
CMF C10 H10 O2



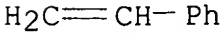
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

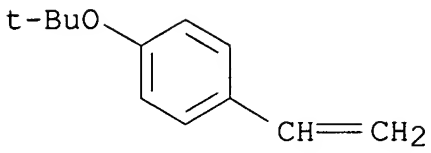
CRN 100-42-5
CMF C8 H8



RN 288622-95-7 HCA
CN Phenol, 4-ethenyl-, acetate, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

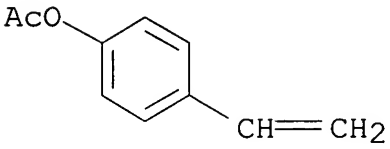
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

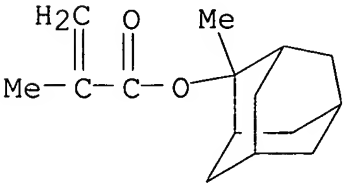
CRN 2628-16-2
CMF C10 H10 O2



RN 330576-44-8 HCA
CN 2-Propenoic acid, 2-methyl-, 2-methyltricyclo[3.3.1.13,7]dec-2-yl ester, polymer with bicyclo[2.2.1]hept-2-ene, 2,5-furandione and 1,2,3,4,4a,5,8,8a-octahydro-1,4:5,8-dimethanonaphthalen-2-ol (9CI) (CA INDEX NAME)

CM 1

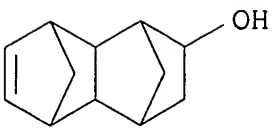
CRN 177080-67-0
CMF C15 H22 O2



CM 2

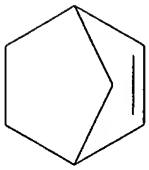
CRN 7388-87-6

CMF C12 H16 O



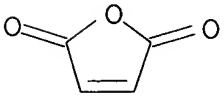
CM 3

CRN 498-66-8
CMF C7 H10



CM 4

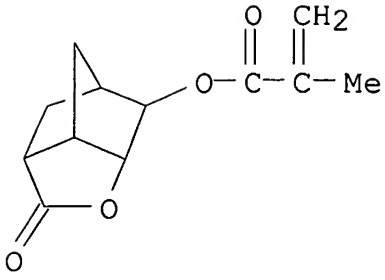
CRN 108-31-6
CMF C4 H2 O3



RN 340964-24-1 HCA
CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 2-methyltricyclo[3.3.1.13,7]dec-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

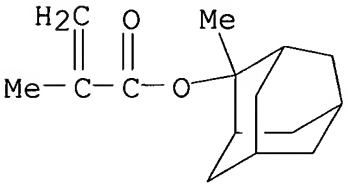
CM 1

CRN 254900-07-7
CMF C12 H14 O4



CM 2

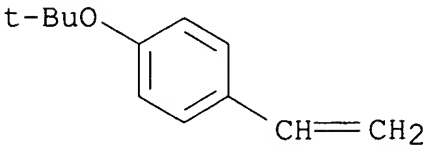
CRN 177080-67-0
CMF C15 H22 O2



RN 406198-64-9 HCA
CN Phenol, 4-ethenyl-, acetate, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

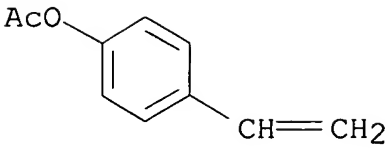
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

CRN 2628-16-2
CMF C10 H10 O2



CM 3

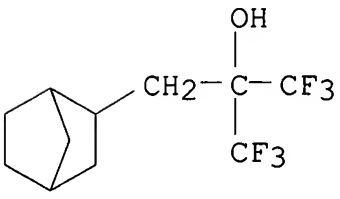
CRN 100-42-5
CMF C8 H8

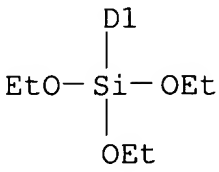
$H_2C{=}CH{-}Ph$

RN 479628-09-6 HCA
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(triethoxysilyl)-, 1,1-dimethylethyl ester, polymer with triethoxymethylsilane and 5(or 6)-(triethoxysilyl)-.alpha.,.alpha.-bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol (9CI) (CA INDEX NAME)

CM 1

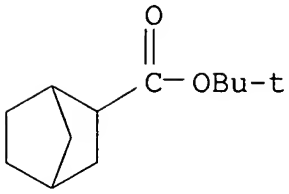
CRN 365546-74-3
CMF C17 H28 F6 O4 Si
CCI IDS

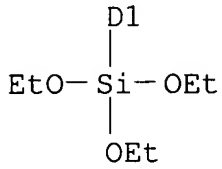




CM 2

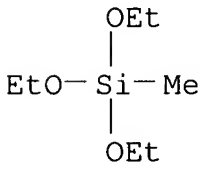
CRN 365546-63-0
CMF C18 H34 O5 Si
CCI IDS





CM 3

CRN 2031-67-6
CMF C7 H18 O3 Si



IC ICM G03F007-004
ICS G03F007-039; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT **66003-78-9**, **Triphenylsulfonium** trifluoromethanesulfonate **84563-54-2**, Bis[4-(tert-butyl)phenyl)**iodonium** trifluoromethanesulfonate **138529-81-4**, Bis(cyclohexylsulfonyl)diazomethane **181425-38-7 209482-18-8**
(acid-generating agent; pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)
IT **4238-71-5**, 1-Benzylimidazole **13750-62-4**, 1-Benzyl-2-methylimidazole
(pos.-working radiation resist resin compn. contg. substituted

imidazole prepd. from)

IT **683786-05-2P 683786-06-3P**
(pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)

IT 109-92-2DP, Ethyl vinyl ether, reaction product with polyhydroxystyrene 24424-99-5DP, Di(tert-butyl) dicarbonate, reaction product with polyhydroxystyrene **24979-70-2DP**, Poly(p-hydroxystyrene), reaction product with di-Bu dicarbonate **123589-22-0DP**, p-(tert-Butoxy)styrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether **129674-22-2DP**, p-(tert-Butoxy)carbonyloxystyrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether **221549-67-3P 288622-95-7P 330576-44-8P 340964-24-1P 406198-64-9P 479628-09-6P**
(pos.-working radiation resist resin compn. contg. substituted imidazole with storage stability)

L43 ANSWER 2 OF 8 HCA COPYRIGHT 2006 ACS on STN

139:53804 Heterocyclic ring-containing compounds and compositions containing them. Utsu, Hiromi; Toriumi, Takashi; Miki, Yasuaki (Mitsubishi Chemical Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2003176332 A2 20030624, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-378878 20011212.

AB The compds. are represented by Q1CH2[X1(R1X2)mC6H4Z1C6H4(X3R2)nX4CH2CH(OH)CH2]rX(R3X6)pC6H4Z2C6H4(X7R4)qX8CH2Q2 (I; R1-4 = C1-10 hydrocarbon; X1-8 = O, S; Q1, Q2 = oxiranyl, thiiranyl; Z1, Z2 = S, SO2, S2, CO; m, n, p, q, r = 0-10; Z1 = Z2 .noteq. S; p = q = r .noteq. 0; X5 = X8 .noteq. S; Z1 = Z2 .noteq. SO2; Q1 = Q2 .noteq. oxiranyl). Polymerizable compns. contg. I and auxiliary crosslinking agents, cured products of them, sealing materials and adhesives of the compns., optical materials made of the cured products, laminates having a layer of the cured products, and the curing process are also claimed. Thus, 50 g 4,4'-bis(2-hydroxyethylthio)diphenyl sulfone was treated with 250 g epichlorohydrin in DMSO in the presence of aq. KOH to give 67 g glycidyl ether, which was dissolved in PhMe and treated with 24.6 g thiourea and 100 mL MeOH under reflux to give 62.5 g I (r = 0; Q1, Q2 = thiiranyl; X5, X8 = O; X6, X7 = S; R3, R4 = C2H4; p, q = 1; II). Then 20 g II was mixed with 0.4 g Adeka Optomer SP 170 (**photoacid** generator), poured in a space between glass sheets, irradiated with UV, and heated to give a cured product showing refractive index 1.67 and thermal decompn. temp. 265.5.degree. in N.

IT **106220-70-6**, Adeka Optomer SP 150 **125054-47-9**, Adeka Optomer SP 170
(**photoacid** generator; heterocyclic compds. and compns. for sealants, adhesives, optical materials, and laminates)

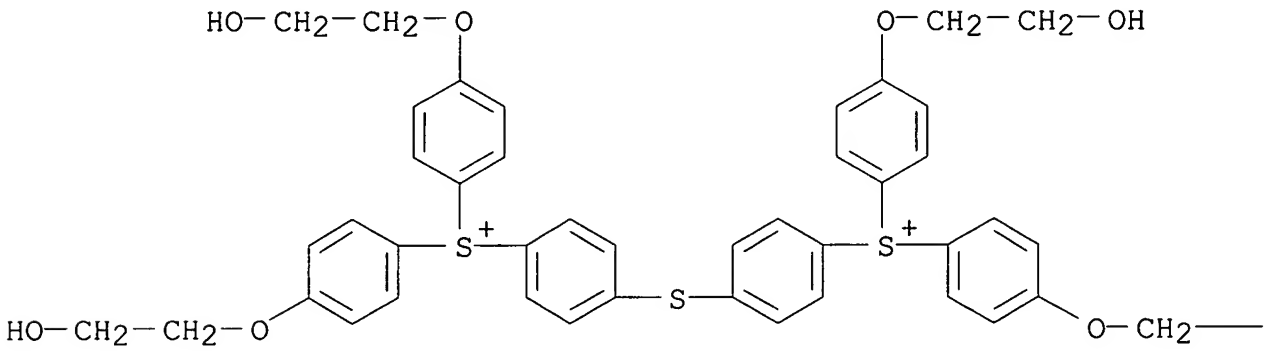
RN 106220-70-6 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

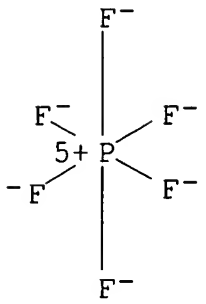


PAGE 1-B

—CH2—OH

CM 2

CRN 16919-18-9
CMF F6 P
CCI CCS

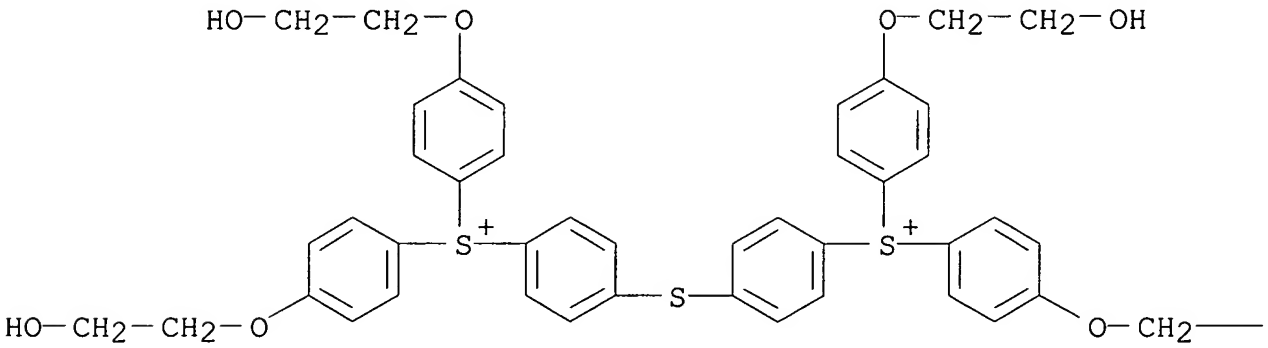


RN 125054-47-9 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

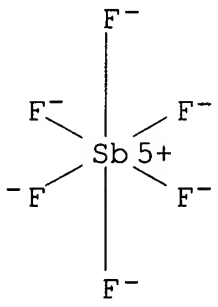


PAGE 1-B

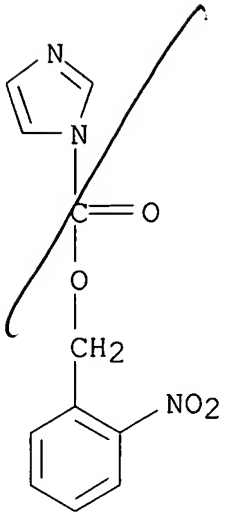
—CH_2—OH

CM 2

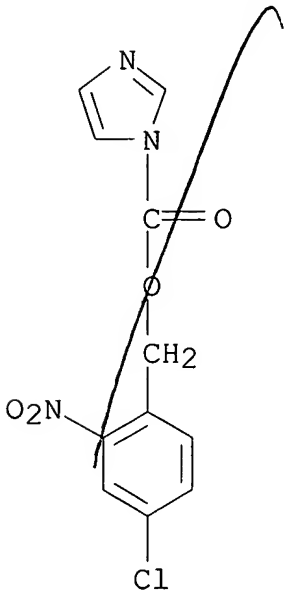
CRN 17111-95-4
CMF F6 Sb
CCI CCS



IT **156841-22-4**, N-(2-Nitrobenzyloxycarbonyl)imidazole
188304-96-3, N-(4-Chloro-2-nitrobenzyloxycarbonyl)imidazole
(photobase generator; heterocyclic compds. and compns. for sealants, adhesives, optical materials, and laminates)
RN 156841-22-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 188304-96-3 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-chloro-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



IC ICM C08G059-04
ICS C08G075-08; C09J163-00; C09J181-00; C09J201-02; G02B001-04
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 25, 27, 38, 73
IT **106220-70-6**, Adeka Optomer SP 150 **125054-47-9**, Adeka Optomer SP 170
(**photoacid** generator; heterocyclic compds. and compns. for sealants, adhesives, optical materials, and laminates)
IT **156841-22-4**, N-(2-Nitrobenzyloxycarbonyl)imidazole

188304-96-3, N-(4-Chloro-2-nitrobenzyloxycarbonyl)imidazole
(photobase generator; heterocyclic compds. and compns. for sealants, adhesives, optical materials, and laminates)

L43 ANSWER 3 OF 8 HCA COPYRIGHT 2006 ACS on STN
136:295857 Photocurable compositions containing thiirane group-having compounds, their cured products, and their use as optical materials, adhesives, pressure-sensitive adhesives, and laminates. Miki, Yasuaki; Toda, Atsushi; Matsunami, Hitoshi; Sugita, Yusuke (Mitsubishi Chemical Corp., Japan; Nippon Synthetic Chemical Industry Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 2002105110 A2 **20020410**, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-304657 20001004.

AB The compns., useful as (pressure-sensitive) adhesives, contain (A) compds. having .gtoreq.1 thiirane rings, (B) ethylenically unsatd. compds., and (C) photobase generators, **photoacid** generators, and/or photochem. radical polymn. initiators as photochem. initiators. The compds. are irradiated with actinic ray preferably under contacting with a mold, optionally followed by heating to give cured products for optical materials. The laminates have the above compn. or cured product layers and substrate layers. Thus, a compn. contg. a thiirane ring-having compd. (prepd. from Epikote 807 and KSCN) 10, 55% divinylbenzene 5, benzophenone 0.015, and N-(2-nitrobenzyloxycarbonyl)imidazole 0.15 g was sandwiched between quartz glasses and irradiated with UV and heated at 60.degree. for 2 h to give a 2-mm transparent sheet.

IT **125054-47-9DP**, Adeka Optomer SP 170, polymers with thioepoxy resins
(photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)

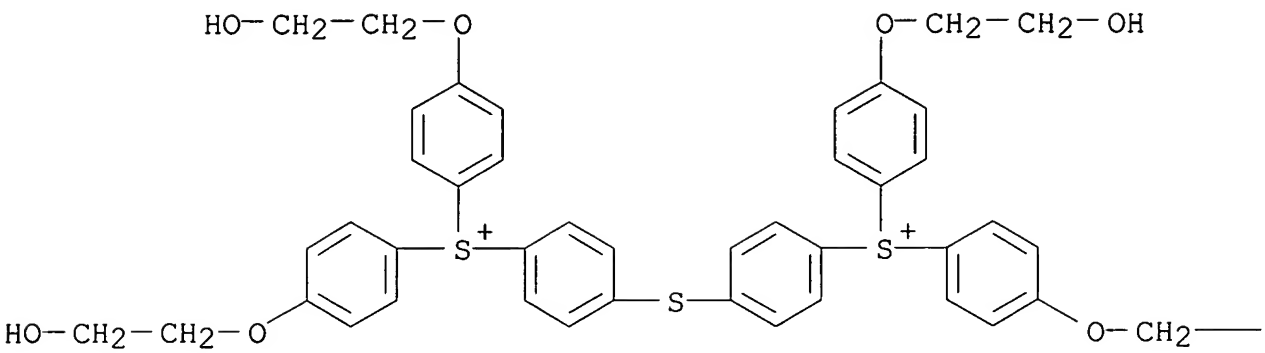
RN 125054-47-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

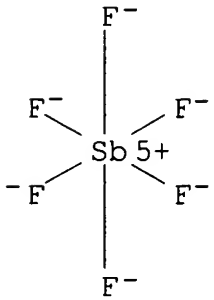


PAGE 1-B

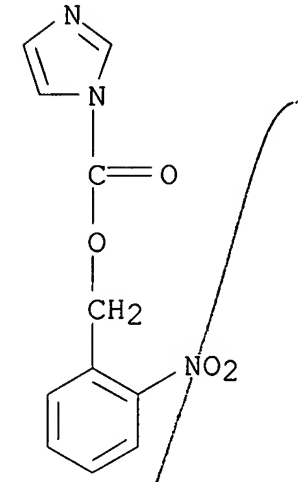
— CH_2 — OH

CM 2

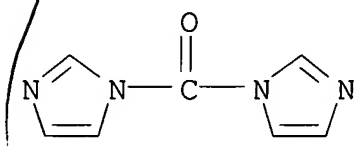
CRN 17111-95-4
CMF F6 Sb
CCI CCS



IT **156841-22-4P**, N-(2-Nitrobenzyloxycarbonyl)imidazole
(photopolymn. initiator; photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)
RN 156841-22-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



IT **530-62-1**
(reaction with nitrobenzyl alc. for prepn. of polymn. initiator; photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)
RN 530-62-1 HCA
CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



IC ICM C08F002-44
ICS B32B027-00; C08F002-50; C08J005-00; C09J004-00; C09J181-00; C08L101-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42, 73
IT 140-88-5DP, Ethyl acrylate, polymers with thioepoxy resins
1321-74-0DP, Divinylbenzene, polymers with thioepoxy resins
25068-38-6DP, Epikote 828, partially replaced with thiirane derivs., polymers with acrylic monomers 58421-55-9DP, Epikote 807, partially replaced with thiirane derivs., polymers with acrylic

monomers 112503-98-7DP, polymers with thioepoxy resins **125054-47-9DP**, Adeka Optomer SP 170, polymers with thioepoxy resins 345290-67-7DP, polymers with thioepoxy resins 406934-21-2DP, PR 201, polymers with thioepoxy resins (photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)

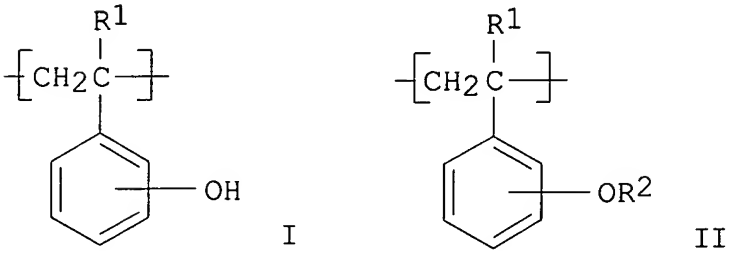
IT **156841-22-4P**, N-(2-Nitrobenzyloxycarbonyl)imidazole (photopolymn. initiator; photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)

IT **530-62-1** (reaction with nitrobenzyl alc. for prepn. of polymn. initiator; photocurable compns. contg. thiirane group-having compds. and their cured products for optical materials, (pressure-sensitive) adhesives, and laminates)

L43 ANSWER 4 OF 8 HCA COPYRIGHT 2006 ACS on STN

136:286596 Radiation sensitive resin composition. Miyaji, Masaaki; Nagai, Tomoki; Yada, Yuji; Numata, Jun; Nishimura, Yukio; Yamamoto, Masafumi; Ishii, Hiroyuki; Kajita, Toru; Shimokawa, Tsutomu (JSR Corporation, Japan). Eur. Pat. Appl. EP 1193558 A2 **20020403**, 71 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-122213 20010917. PRIORITY: JP 2000-282689 20000918; JP 2000-401302 20001228.

GI



AB A chem. amplified radiation sensitive resin compn. comprises a specific copolymer and a **photoacid** generator, wherein the copolymer contains the recurring unit I and/or II and CH2CR1(C:O)NR3R4 (R1 = H, Me; R2 = C4-10 tertiary alkyl; R3,4 = H, C1-12 alkyl, C6-15 arom., C1-12 alkoxyl, or R3 and R4 may form, in combination and together with the nitrogen atom with which the R3 and R4 groups bond, a C3-14 cyclic structure, provided that R3 and R4 are not a hydrogen atom at the same time). The compn.

effectively responds to various radiations, exhibits excellent resoln. and pattern configuration and minimal iso-dense bias, and can form fine patterns at a high precision and in a stable manner.

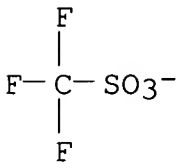
IT **66003-78-9, Triphenylsulfoniumtrifluoromethanesulfonate** **84563-54-2,** Bis(4-tert-butylphenyl)**iodonium** trifluoromethanesulfonate **138529-81-4,** Bis(cyclohexylsulfonyl)diazomethane **185195-30-6D,** Bis(4-tert-butylphenyl)**iodonium** 10-camphorsulfonate, reaction product with Et vinyl ether **194999-85-4**
(acid generator; radiation sensitive resin compn. for photoresist contg.)

RN 66003-78-9 HCA

CN Sulfonium, triphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

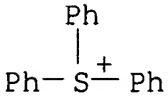
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

CRN 18393-55-0
CMF C18 H15 S

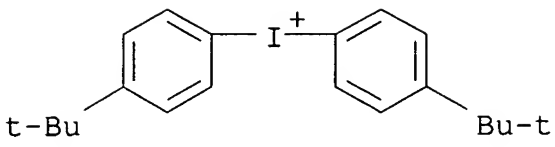


RN 84563-54-2 HCA

CN Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

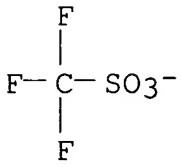
CM 1

CRN 61267-44-5
CMF C20 H26 I

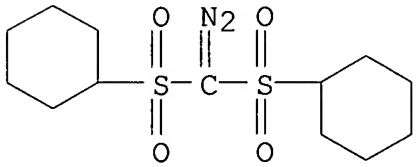


CM 2

CRN 37181-39-8
CMF C F3 O3 S



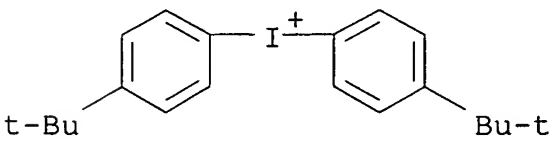
RN 138529-81-4 HCA
CN Cyclohexane, 1,1'-[(diazomethylene)bis(sulfonyl)]bis- (9CI) (CA INDEX NAME)



RN 185195-30-6 HCA
CN Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with (1S,4R)-7,7-dimethyl-2-oxobicyclo[2.2.1]heptane-1-methanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

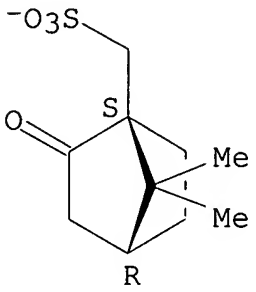
CRN 61267-44-5
CMF C20 H26 I



CM 2

CRN 46362-90-7
CMF C10 H15 O4 S

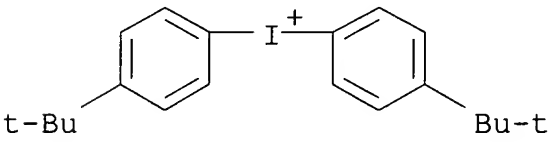
Absolute stereochemistry.



RN 194999-85-4 HCA
CN Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-1-butanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 61267-44-5
CMF C20 H26 I



CM 2

CRN 45187-15-3
CMF C4 F9 O3 S

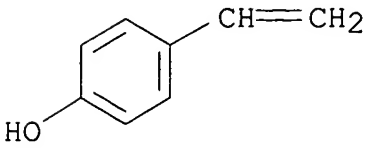
$^{-}O_3S-(CF_2)_3-CF_3$

IT **24979-70-2DP**, Poly(p-hydroxystyrene), reaction product with Et vinyl ether and Et propenyl ether **123589-22-0DP**, p-tert-Butoxystyrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether **221549-67-3DP**, hydrolyzed **406198-62-7DP**, hydrolyzed **406198-64-9DP**,

hydrolyzed
(resin; radiation sensitive resin compn. for photoresist contg.)
RN 24979-70-2 HCA
CN Phenol, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

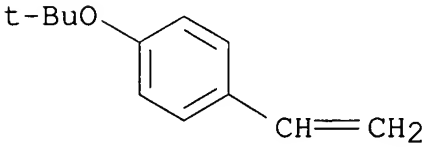
CRN 2628-17-3
CMF C8 H8 O



RN 123589-22-0 HCA
CN Phenol, 4-ethenyl-, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene (9CI) (CA INDEX NAME)

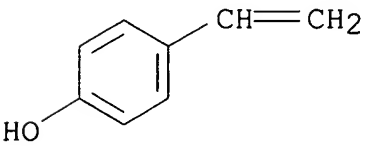
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

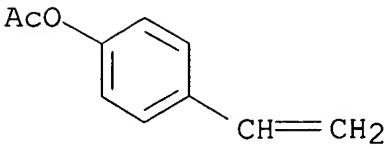
CRN 2628-17-3
CMF C8 H8 O



RN 221549-67-3 HCA
CN 2-Propenoic acid, 1,1-dimethylethyl ester, polymer with ethenylbenzene and 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

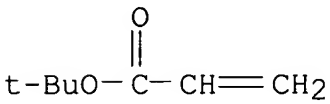
CM 1

CRN 2628-16-2
CMF C10 H10 O2



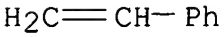
CM 2

CRN 1663-39-4
CMF C7 H12 O2



CM 3

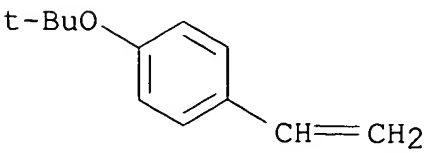
CRN 100-42-5
CMF C8 H8



RN 406198-62-7 HCA
CN Phenol, 4-ethenyl-, acetate, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and 1-(1-oxo-2-propenyl)-1H-imidazole (9CI) (CA INDEX NAME)

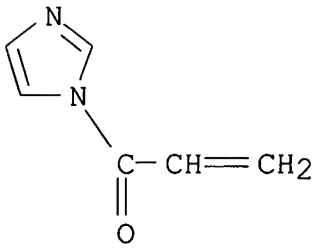
CM 1

CRN 95418-58-9
CMF C12 H16 O



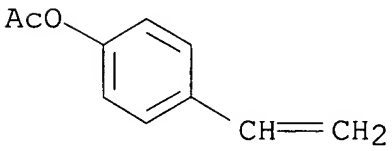
CM 2

CRN 40736-25-2
CMF C6 H6 N2 O



CM 3

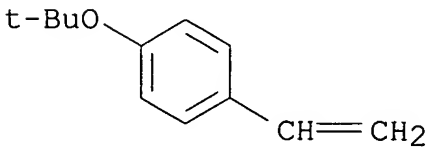
CRN 2628-16-2
CMF C10 H10 O2



RN 406198-64-9 HCA
CN Phenol, 4-ethenyl-, acetate, polymer with 1-(1,1-dimethylethoxy)-4-ethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

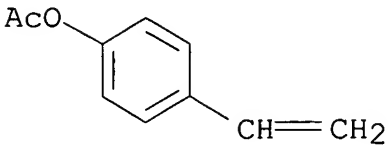
CM 1

CRN 95418-58-9
CMF C12 H16 O



CM 2

CRN 2628-16-2
CMF C10 H10 O2



CM 3

CRN 100-42-5
CMF C8 H8

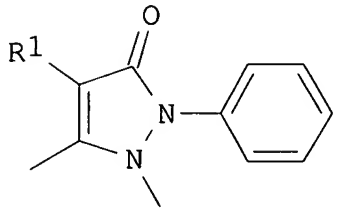
$H_2C{=}CH{-}Ph$

IC ICM G03F007-038
ICS G03F007-039; G03F007-004
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT **66003-78-9**, **Triphenylsulfoniumtrifluoromethanesulfonate** **84563-54-2**, Bis(4-tert-butylphenyl)**iodonium** trifluoromethanesulfonate 133710-62-0 **138529-81-4**, Bis(cyclohexylsulfonyl)diazomethane **185195-30-6D**, Bis(4-tert-butylphenyl)**iodonium** 10-camphorsulfonate, reaction product with Et vinyl ether **194999-85-4** 205514-94-9, N-(10-Camphorsulfonyloxy)succinimide 406198-76-3 406198-77-4
(acid generator; radiation sensitive resin compn. for photoresist contg.)
IT 109-92-2DP, Ethyl vinyl ether, reaction product with poly(hydroxystyrene) 928-55-2DP, Ethyl-1-propenyl ether, reaction product with poly(hydroxystyrene) 2182-55-0DP, Cyclohexyl vinyl ether, reaction product with poly(hydroxystyrene) **24979-70-2DP**, Poly(p-hydroxystyrene), reaction product with Et vinyl ether and Et propenyl ether **24979-70-2DP**, Poly(p-hydroxystyrene), reaction product with di-Bu carbonate 34619-03-9DP, Di-tert-butyl carbonate, reaction product with poly(hydroxystyrene) 95418-60-3DP, Poly (p-tert-Butoxystyrene), hydrolyzed, and/or reaction product with cyclohexyl vinyl ether **123589-22-0DP**, p-tert-Butoxystyrene-p-hydroxystyrene copolymer, reaction product with Et vinyl ether 221524-18-1DP, reaction product with Et vinyl ether **221549-67-3DP**, hydrolyzed 340964-44-5P 357167-14-7P 406198-55-8DP, hydrolyzed

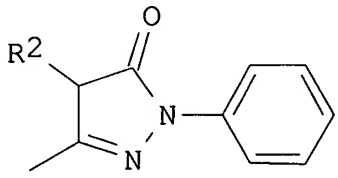
406198-56-9DP, hydrolyzed 406198-57-0DP, hydrolyzed
406198-58-1DP, hydrolyzed 406198-60-5DP, hydrolyzed
406198-61-6DP, hydrolyzed **406198-62-7DP**, hydrolyzed
406198-63-8DP, hydrolyzed **406198-64-9DP**, hydrolyzed
406198-68-3P 406198-69-4P 406198-70-7P 406198-71-8P
406198-72-9P 406198-73-0P 406198-74-1P 406198-75-2P
(resin; radiation sensitive resin compn. for photoresist contg.)

L43 ANSWER 5 OF 8 HCA COPYRIGHT 2006 ACS on STN
136:158838 Radiation sensitive compositions containing image quality and profile enhancement additives. Toukhy, Medhat A.; McCormick, Gail; Marshall, Jacqueline M.; Blakeney, Andrew J. (Arch Specialty Chemicals, Inc., USA). PCT Int. Appl. WO 2002008834 A1 **20020131**, 40 pp. DESIGNATED STATES: W: JP, KR, SG; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US13294 20010425. PRIORITY: US 2000-620384 20000720.

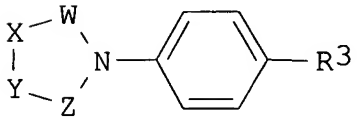
GI



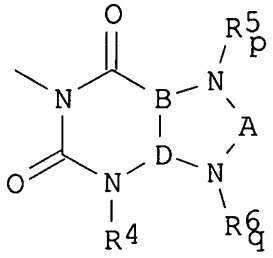
I



II



III



IV

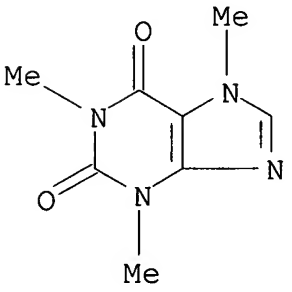
AB The present invention disclosed a photoresist compn. that includes a polymer, a **photoacid** generator, a solvent, a heterocyclic additive as an image quality and profile enhancer, and, optionally, a basic compd. as a proton scavenger. The heterocyclic additive is selected from the group consisting of I (R1 = H, -NH2, -OH, -N(CH3)2, -NH-CO-CH3 or 4-antipyrinylmethyl group), II (R2= -CH3 or benzoyl), III (R3 = H, or C1-4 alkyl; W, X, Y, and Z are each independently selected from -CH2-, -CO-, -CH(CH3)-, -C(CH3)2-, -NH-, or -N(CH3)-, with the proviso that at least one of W, X, Y, or Z is

-CO-, and at least one of them is -NH- or -N(CH3)-), IV (A = -CH= or -CO-; R4 = H, -CH3, or -CH2-CH(CH3)2; R5 = H, -CH3, or -CH2-CH(OH)-CH2(OH); R6 = H; B and D are both carbon atoms, and the bond between them could be single bond or double bond; when A is -CH=, one of p and q is 0, and the other is 1; when A is -CO-, p and q are both 1).

IT **58-08-2**, Caffeine, uses **530-62-1**, 1,1'-Carbonyldiimidazole
(image quality and profile enhancement additive in radiation sensitive compn.)

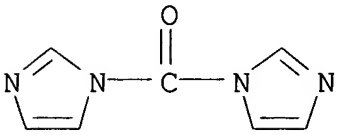
RN 58-08-2 HCA

CN 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9CI) (CA INDEX NAME)



RN 530-62-1 HCA

CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 27, 38

IT **Sulfonium** compounds
(arene, sulfonate; **photoacid** generator in radiation sensitive compn.)

IT Aromatic compounds
(**sulfonium**, sulfonate; **photoacid** generator in radiation sensitive compn.)

IT **58-08-2**, Caffeine, uses 58-15-1, 4-Dimethylaminoantipyrine 60-80-0, Antipyrine 83-07-8, 4-Aminoantipyrine 83-15-8, 4-Acetaminoantipyrine **530-62-1**, 1,1'-Carbonyldiimidazole 1672-63-5, 4-Hydroxyantipyrine 2654-58-2, 4,4-Dimethyl-1-phenyl-3-

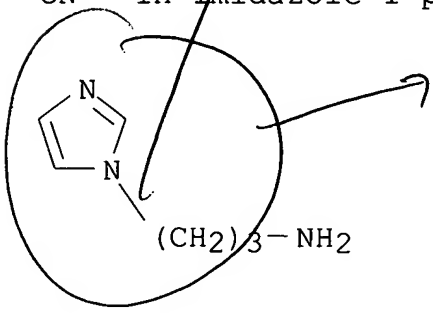
pyrazolidinone 4641-57-0, 1-Phenyl-2-pyrrolidinone 15988-11-1, 4-Phenylurazole 128120-02-5
(image quality and profile enhancement additive in radiation sensitive compn.)

L43 ANSWER 6 OF 8 HCA COPYRIGHT 2006 ACS on STN
131:52061 Process and composition for generation of acids for image formation. Grasshoff, Jurgen M.; Marshall, John L.; Minns, Richard A.; Ramos, Socorro M.; Stroud, Stephen G.; Telfer, Stephen J.; Yang, Haixin; Boggs, Roger A.; Kolb, Eric S. (Polaroid Corp., USA). U.S. US 5914213 A **19990622**, 37 pp., Cont.-in-part of U.S. Ser. No. 757,195. (English). CODEN: USXXAM. APPLICATION: US 1997-944284 19971006. PRIORITY: US 1996-757195 19961127.

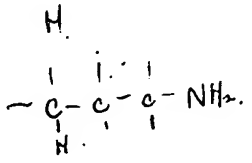
AB A process for the generation of acids for image formation uses a compn. comprising a first acid generator capable of generating a first acid and a second acid generator capable of thermal decompn. to form a second acid catalyzed by the first acid. At least part of the compn. is exposed to light to cause formation of the first acid from the first acid generator, and the compn. is then heated to cause, in the exposed part of the compn., acid-catalyzed thermal decompn. of the second acid generator to form the secondary acid. The second acid generator has a first site bearing a first leaving group and a second site bearing a second leaving group, the first leaving group being capable of protonation by the first acid, with expulsion of the first leaving group to form a cation which electrophilically adds to an unsatd. reagent bearing a proton at the site of addn. and a proton-contg. nucleophilic grouping at an adjacent site, following which the proton on the reagent is lost and the second leaving group is displaced by the nucleophilic grouping, the second leaving group, in combination with a proton, forming the second acid.

IT **5036-48-6**, 1H-Imidazole-1-propanamine **139301-16-9**
(photothermog. imaging compns. contg. thermosensitive acid generators and)

RN 5036-48-6 HCA
CN 1H-Imidazole-1-propanamine (9CI) (CA INDEX NAME)



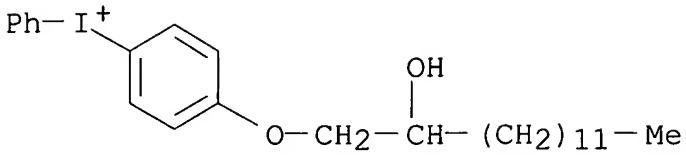
different Layer from Acid generator



RN 139301-16-9 HCA
CN Iodonium, [4-[(2-hydroxytetradecyl)oxy]phenyl]phenyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

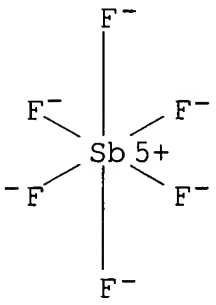
CM 1

CRN 139301-14-7
CMF C26 H38 I O2

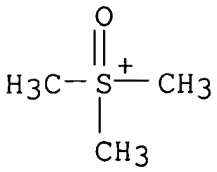


CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS

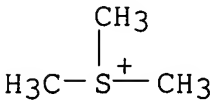


IT **1774-47-6**, Trimethylsulfoxonium iodide **3084-53-5**, **Trimethylsulfonium** bromide
(reaction in prepn. of thermosensitive acid generator for imaging process)
RN 1774-47-6 HCA
CN Sulfoxonium, trimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)



● I^-

RN 3084-53-5 HCA
CN Sulfonium, trimethyl-, bromide (8CI, 9CI) (CA INDEX NAME)



● Br^-

IC ICM G03C001-492
ICS G03C001-494; G03C001-76
INCL 430270100
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST photochem acid generating compn image formation; second acid formation imaging **photoacid** generator
IT Photothermographic copying
(compns. contg. **photoacid** generator for forming first acid and thermosensitives acid generator for forming second acid catalyzed by first acid for)
IT Photoimaging materials
(contg. **photoacid** generator for forming first acid and thermosensitives acid generator for forming second acid catalyzed by first acid)
IT 903-19-5 **5036-48-6**, 1H-Imidazole-1-propanamine
139301-16-9 170634-06-7, Copikem 35 227314-96-7
(photothermog. imaging compns. contg. thermosensitive acid generators and)
IT 92-69-3, 4-Phenylphenol 98-59-9, p-Toluenesulfonyl chloride 98-88-4, Benzoyl chloride 100-58-3, Phenylmagnesium bromide 104-92-7, p-Bromoanisole 456-03-1, 4'-Fluoropropiophenone

504-01-8, 1,3-Cyclohexanediol 529-34-0, .alpha.-Tetralone 613-37-6, 4-Methoxybiphenyl 1197-99-5 **1774-47-6**, Trimethylsulfoxonium iodide **3084-53-5**, **Trimethylsulfonium** bromide 4373-13-1, 3,4-Dihydro-1-methylnaphthalene 13139-86-1, p-Methoxyphenylmagnesium bromide 53783-87-2, Bicyclo[2.2.1]hept-2-en-7-ol
(reaction in prepn. of thermosensitive acid generator for imaging process)

L43 ANSWER 7 OF 8 HCA COPYRIGHT 2006 ACS on STN
127:42277 Positive-working photoresist composition showing high resolution power. Aoso, Toshiaki; Fujimori, Toru; Yamanaka, Hitoshi; Uenishi, Kazuya (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 09106073 A2 **19970422** Heisei, 56 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-261635 19951009.

AB The compn. contains (i) a resin contg. a basic N and an acid-decomposable group and (ii) an acid generator sensitive to active/radiation beam. The resin may contain CH2CR1C6H4OH, CH2CR1C6H4OR2, and CH2CR1X or CH2CR1C6H4Y [R1 = H, Me; R2 = an acid-decomposable group; X = a basic-N-contg. heterocycle, CONHR3Z, CO2R3Z (Z = a basic-N-contg. group; R3 = alkylene, arylene); Y = a basic-N-contg. group].

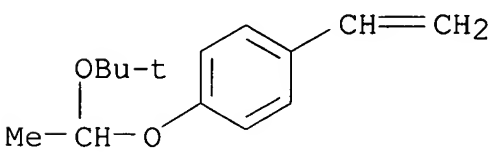
IT **190612-94-3P**
(alk.-developable pos.-working photoresist compn. showing high resoln. power)

RN 190612-94-3 HCA

CN Phenol, 4-ethenyl-, polymer with 1-[1-(1,1-dimethylethoxy)ethoxy]-4-ethenylbenzene and 1-[(ethenylphenyl)methyl]-1H-imidazole (9CI) (CA INDEX NAME)

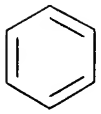
CM 1

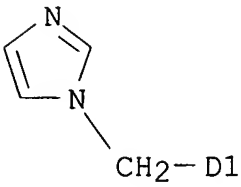
CRN 169811-45-4
CMF C14 H20 O2



CM 2

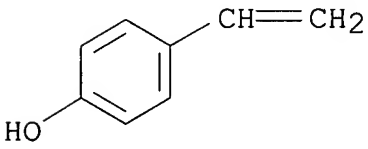
CRN 97427-93-5
CMF C12 H12 N2
CCI IDS





CM 3

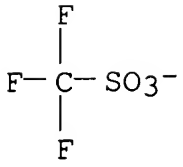
CRN 2628-17-3
CMF C8 H8 O



IT **66003-76-7, Diphenyliodonium** trifluoromethanesulfonate **66003-78-9, Triphenylsulfonium** trifluoromethanesulfonate **177786-96-8**
(**photoacid** generator; alk.-developable pos.-working photoresist compn. showing high resoln. power)
RN 66003-76-7 HCA
CN Iodonium, diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

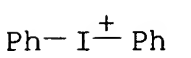
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

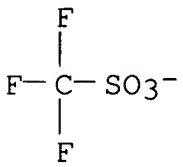
CRN 10182-84-0
CMF C12 H10 I



RN 66003-78-9 HCA
CN Sulfonium, triphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

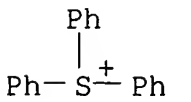
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

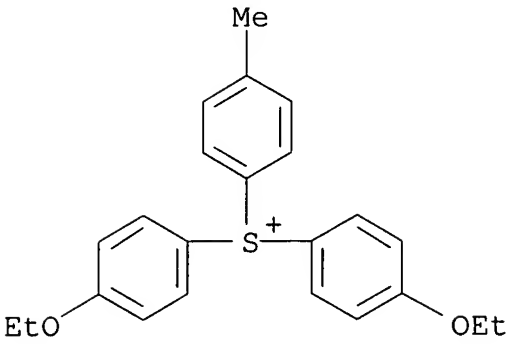
CRN 18393-55-0
CMF C18 H15 S



RN 177786-96-8 HCA
CN Sulfonium, bis(4-ethoxyphenyl)(4-methylphenyl)-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

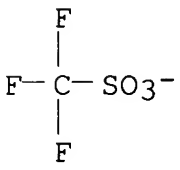
CM 1

CRN 59626-54-9
CMF C23 H25 O2 S



CM 2

CRN 37181-39-8
CMF C F3 O3 S



IC ICM G03F007-039
ICS G03F007-00; G03F007-004; G03F007-023; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76
IT 926-02-3DP, tert-Butyl vinyl ether, reaction product with hydrolyzed vinylpyridine-acetoxystyrene copolymer 5292-43-3DP, tert-Butyl bromoacetate, reaction product with hydrolyzed vinylpyridine-acetoxystyrene copolymer 190434-68-5P 190434-69-6P 190434-70-9P 190434-71-0P 190434-73-2P 190434-74-3P 190434-76-5P 190434-77-6DP, hydrolyzed, reaction product with tert-Bu bromoacetate 190434-80-1P **190612-94-3P** 190612-95-4P 190677-60-2P
(alk.-developable pos.-working photoresist compn. showing high resoln. power)
IT **66003-76-7, Diphenyliodonium** trifluoromethanesulfonate **66003-78-9,**

Triphenylsulfonium trifluoromethanesulfonate 142096-70-6 176109-33-4 **177786-96-8**
(**photoacid** generator; alk.-developable pos.-working photoresist compn. showing high resoln. power)

L43 ANSWER 8 OF 8 HCA COPYRIGHT 2006 ACS on STN
112:242897 Application of specially structured polycarbonate as a positive photoresist material. Loong, Wen An; Chen, Rong Hsiung (Inst. Appl. Chem., Natl. Chiao Tung Univ., Hsinchu, 30050, Taiwan). Cailiao Kexue, 21(4), 238-43 (Chinese) **1989**. CODEN: TLKHAJ. ISSN: 0379-6906.

AB The reaction of depolymn. of specially structured polycarbonate catalyzed by **photoacid** after 254 nm exposure and post-exposure bake was studied. Results indicate that polycarbonate contg. 2-10 wt% **photoacid**, undergoes depolymn. after exposure and 70-100.degree. post-exposure bake. Small mols. having low volatility are formed and can be removed under vacuo. In the absence of **photoacid**, polycarbonate begins thermolysis at the much higher temp. range of 190-200.degree.. The mixt. of **photoacid** and polycarbonate can be applied as a pos. resist system through masked exposure followed by post-exposure bake in vacuo below 100.degree.. The system is self-developable. Acid-catalyzed depolymn. is chem. amplified and therefore sensitivity is greatly improved. For the resist system with 10 wt.% **photoacid** and 1.2 .mu.m film thickness, exposure doses of 30 mJ/cm2 are required.

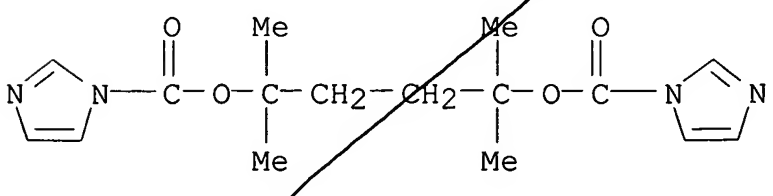
IT **98716-65-5**
(photoresist system contg.)

RN 98716-65-5 HCA

CN 1H-Imidazole-1-carboxylic acid, 1,1,4,4-tetramethyl-1,4-butanediyl ester, polymer with 1,4-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

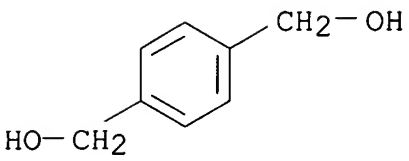
CRN 98716-64-4
CMF C16 H22 N4 O4



CM 2

CRN 589-29-7

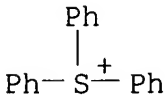
CMF C8 H10 O2



IT **57900-42-2**
(pos. photoresist system contg. polycarbonate and, depolymn. in)
RN 57900-42-2 HCA
CN Sulfonium, triphenyl-, hexafluoroarsenate(1-) (9CI) (CA INDEX NAME)

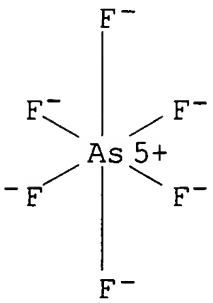
CM 1

CRN 18393-55-0
CMF C18 H15 S



CM 2

CRN 16973-45-8
CMF As F6
CCI CCS



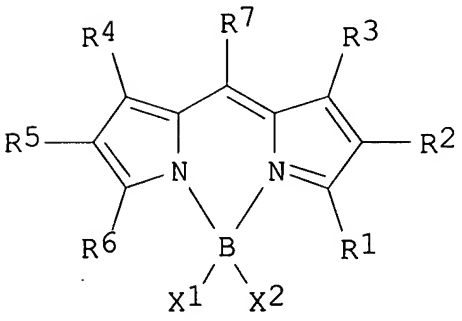
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST photoresist polycarbonate **photoacid** pos
IT Depolymerization
(of polycarbonate in presence of **photoacid**, in pos. photoresist system)

IT Resists
(photo-, polycarbonate-**photoacid** system, depolymn. in)
IT **98716-65-5**
(photoresist system contg.)
IT 98716-42-8
(pos. photoresist system contg. **photoacid** and, depolymn. in)
IT **57900-42-2**
(pos. photoresist system contg. polycarbonate and, depolymn. in)

=> d l44 1-16 cbib abs hitstr hitind

L44 ANSWER 1 OF 16 HCA COPYRIGHT 2006 ACS on STN
137:192756 Photosensitive polymer compositions and their uses in positive-working visible light-sensitive compositions and positive **resists**. Ogiso, Akira; Nakagawa, Shinichi; Misawa, Tsutayoshi (Mitsui Chemicals Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2002236360 A2 **20020823**, 24 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-33824 20010209.

GI



I

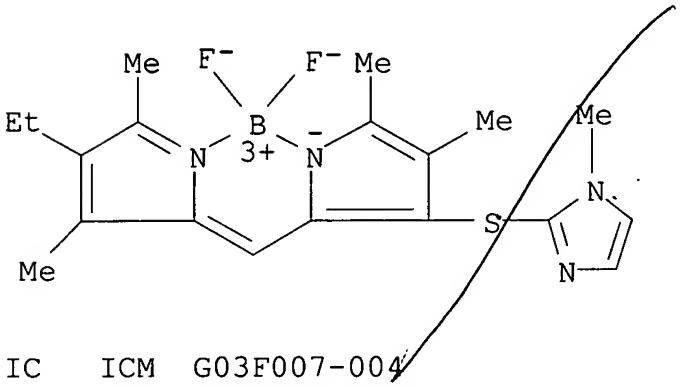
AB The photosensitive polymer compns. comprise pos.-working visible light-sensitive polymers and photosensitizers of dipyrromethene-B complexes I [R1-R6 = H, halo, (un)substituted alkyl, aralkyl, aryl, alkenyl, alkylthio, aralkylthio, arylthio, heterocyclic, thioheterocyclic, NL1L2; L1, L2, R7 = H, (un)substituted alkyl, aralkyl, aryl; neighboring groups in R1-R3 and R4-R6 may be bonded to form (un)substituted ring; X = halo, (un)substituted alkyl, aralkyl, aryl]. Claimed pos.-working visible light-sensitive compns. contain the above polymer compns. and solvents, and the pos. **resists** have the compns. on substrates. The compns. show high sensitivity to visible light regions of Ar laser and YAG laser,

compatibility of the resins and the photosensitizers, and storage stability and give high-resoln. images.

IT **450409-14-0**
(photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

RN 450409-14-0 HCA

CN Boron, [2-[[2-[(4-ethyl-3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-4,5-dimethyl-1H-pyrrol-3-yl-.kappa.N]thio]-1-methyl-1H-imidazolato]difluoro-, (T-4)- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS C08F002-50; G03F007-039; G03F007-26

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photosensitive polymer compn dipyrromethane boron complex photosensitizer; pos **photoresist** dipyrromethane boron complex photosensitizer

IT Phenolic resins, preparation
(novolak, cresol-based; photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT Positive **photoresists**
(photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT Crosslinking catalysts
(photosensitizers; photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT Dyes
(photosensitizing; photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT 85342-62-7, NAI 105
(**photoacid** generator; photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT 55799-81-0 126250-60-0 189264-25-3 450408-97-6 450408-99-8
450409-00-4 450409-02-6 450409-04-8 450409-06-0 450409-08-2
450409-10-6 450409-12-8 **450409-14-0** 450409-16-2
450409-18-4
(photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT 25053-96-7P, o-Cresol-formaldehyde copolymer 25609-90-9P, Acrylic acid-butyl methacrylate-styrene copolymer 161613-66-7P, Acrylic acid-butyl acrylate-p-hydroxystyrene copolymer 255718-66-2P, Butyl acrylate-dimethylaminoethyl methacrylate-p-hydroxystyrene copolymer
(photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

IT 80-05-7D, derivs., diethers with chloroethyl vinyl ether
110-75-8D, 2-Chloroethyl vinyl ether, diethers with bisphenol derivs. 59269-51-1, Poly(hydroxystyrene) 108528-67-2
450411-96-8
(photosensitive polymer compn. contg. dipyrromethene-boron complex photosensitizers for pos.-working visible light-sensitive **resists**)

L44 ANSWER 2 OF 16 HCA COPYRIGHT 2006 ACS on STN
136:284429 Pharmaceutical granular compositions containing synthetic aluminum silicate. Kikuchi, Hiroshi; Iketani, Michiko; Kobayashi, Hideo (Daiichi Pharmaceutical Co., Ltd., Japan). PCT Int. Appl. WO 2002024167 A1 **20020328**, 31 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2001-JP8137 20010919. PRIORITY: JP 2000-283565 20000919.

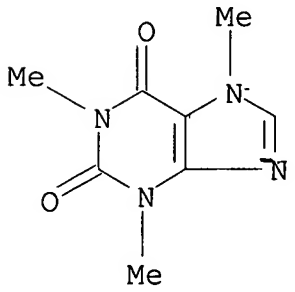
AB Disclosed is a medicinal compn. which comprises (A) a drug, (B) a waxy substance, and (C) a synthetic aluminum silicate and/or hydrous silicon dioxide. The medicinal compn. can be obtained in a granular form suitable for use as a medicine. During the granulation, granule adhesion in the app. is reduced and caking is inhibited. A granular compn. was prepd. from glycerin monoisostearate, synthetic aluminum silicate, hydrous silicon dioxide, silicic acid anhydride, olive oil, propylene glycol, polysiloxane, talc or triacetylglycerin, and ticlopidine hydrochloride.

IT **58-08-2**, Caffeine, biological studies **68-89-3**, Sulpyrine

(pharmaceutical granular compns. contg. drugs and wax, and synthetic aluminum silicate and/or hydrous silicon dioxide)

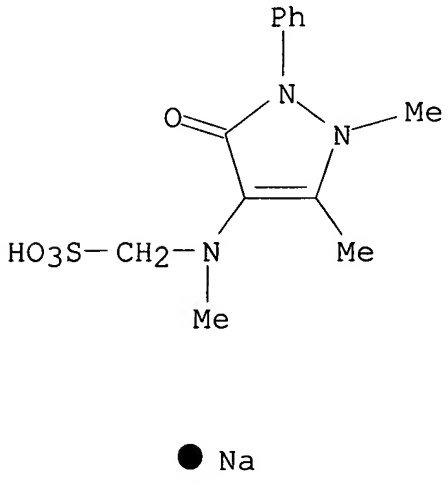
RN 58-08-2 HCA

CN 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9CI) (CA INDEX NAME)



RN 68-89-3 HCA

CN Methanesulfonic acid, [(2,3-dihydro-1,5-dimethyl-3-oxo-2-phenyl-1H-pyrazol-4-yl)methylamino]-, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM A61K009-16
ICS A61K047-10; A61K047-14; A61K047-04; A61K031-4365; A61K031-497

CC 63-6 (Pharmaceuticals)

ST aluminum silicate wax pharmaceutical granular compn; ticlopidine glyceride granular taste **masking**

IT Taste
(**masking**; pharmaceutical granular compns. contg. drugs and wax, and synthetic aluminum silicate and/or hydrous silicon dioxide)

IT 50-06-6, Phenobarbital, biological studies 50-33-9, Phenylbutazone, biological studies 50-98-6, Ephedrine

hydrochloride 56-75-7, Chloramphenicol 57-50-1D, Sucrose, fatty acid esters **58-08-2**, Caffeine, biological studies 58-55-9, Theophylline, biological studies 58-73-1, Diphenhydramine 61-25-6, Papaverine hydrochloride 64-75-5, Tetracycline hydrochloride **68-89-3**, Sulpyrine 69-09-0, Chlorpromazine hydrochloride 69-53-4, Ampicillin 71-63-6, Digitoxin 98-96-4, Pyrazinamide 103-90-2, Acetaminophen 113-52-0, Imipramine hydrochloride 113-92-8, Chlorpheniramine maleate 114-07-8, Erythromycin 125-69-9, Dextromethorphan hydrobromide 137-08-6, Calcium pantothenate 147-24-0, Diphenhydramine hydrochloride 304-20-1, Hydralazine hydrochloride 317-34-0, Aminophylline 318-98-9, Propranolol hydrochloride 364-62-5, Metoclopramide 536-33-4, Ethionamide 550-99-2, Naphazoline hydrochloride 633-65-8, Berberine chloride 657-27-2, Lysine hydrochloride 912-60-7, Noscapine hydrochloride 943-17-9, Etilefrine hydrochloride 1007-42-7 1119-34-2, Arginine hydrochloride 1335-30-4, Aluminum silicate 4330-99-8, Alimemazine tartrate 10279-57-9, Silicon dioxide hydrate 10592-13-9, Doxycycline hydrochloride 16139-18-7, Aminoguanidine hydrochloride 18067-13-5, N-Methylscopolamine methylsulfate 18694-40-1, Epirizole 25322-68-3, Polyethylene glycol 26328-04-1, Cinepazide maleate 27724-96-5, Cetraxate hydrochloride 33286-22-5, Diltiazem hydrochloride 35035-05-3, Timepidium bromide 35941-71-0, Tiaramide hydrochloride 39878-70-1, Talampicillin hydrochloride 51481-61-9, Cimetidine 52315-76-1, Lysine acetate 53885-35-1, Ticlopidine hydrochloride 62232-46-6, Bifemelane hydrochloride 65043-22-3, Indeloxazine hydrochloride 66085-00-5, Glycerin monoisostearate 66357-59-3, Ranitidine hydrochloride 72956-09-3, Carvedilol 76824-35-6, Famotidine 76963-41-2, Nizatidine 77191-36-7, Nefiracetam 79307-93-0, Azelastine hydrochloride 81103-11-9, Clarithromycin 81789-85-7, Indenolol hydrochloride 82419-36-1, Ofloxacin 88069-49-2, Pilsicainide hydrochloride 93793-83-0, Roxatidine acetate hydrochloride 100986-85-4, Levofloxacin 104775-36-2, Ecabapide 120011-70-3, Donepezil hydrochloride 120202-66-6 142494-87-9 144562-61-8
(pharmaceutical granular compns. contg. drugs and wax, and synthetic aluminum silicate and/or hydrous silicon dioxide)

L44 ANSWER 3 OF 16 HCA COPYRIGHT 2006 ACS on STN

136:12698 Synthesis of Tetraorganylborate Salts: **Photogeneration** of Tertiary Amines. Sarker, Ananda M.; Kaneko, Yuji; Neckers, D. C. (Center for Photochemical Sciences, Bowling Green State University, Bowling Green, OH, 43403, USA). Chemistry of Materials, 13(11), 3949-3953 (English) **2001**. CODEN: CMATEX. ISSN: 0897-4756. Publisher: American Chemical Society.

AB The authors report the synthesis of a series of new ammonium tetraorganylborates strategically designed to **photogenerate** tertiary amines. Expts. in acetonitrile show amine formation with

reasonably high quantum yield that depends on the photoreactive acceptor, the borate, and the substituents on the nitrogen atom. The reactive triplet state is reduced by the borate, and this is followed by rapid homolysis of the carbon-nitrogen bond.

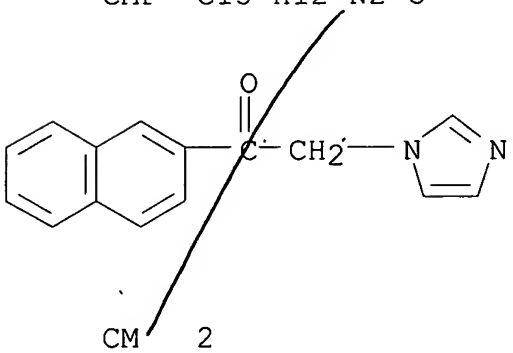
IT **376644-80-3P**, N-(2-Acetylnaphthone)imidazole tetraphenylborate
(photolysis of ammonium tetraorganylborates designed to **photogenerate** tertiary amines for photolithog. applications)

RN 376644-80-3 HCA

CN Borate(1-), tetraphenyl-, hydrogen, compd. with 2-(1H-imidazol-1-yl)-1-(2-naphthalenyl)ethanone (1:1) (9CI) (CA INDEX NAME)

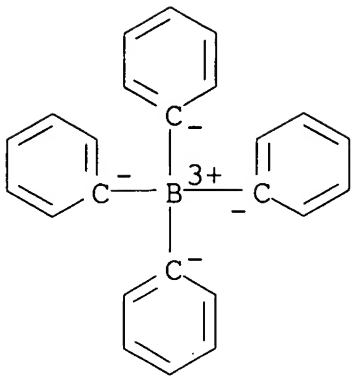
CM 1

CRN 64212-22-2
CMF C15 H12 N2 O

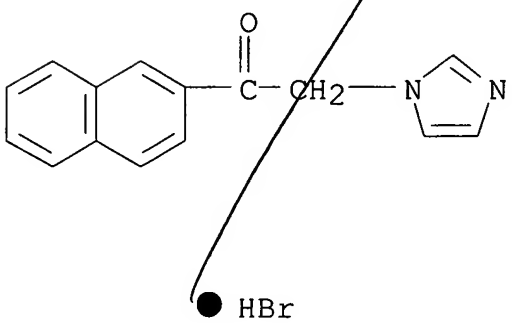


CM 2

CRN 33906-65-9
CMF C24 H20 B . H
CCI CCS



IT **376644-77-8P**, N-(2-Acetylnaphthone)imidazole bromide
(reaction with sodium tetraphenylborate)
RN 376644-77-8 HCA
CN Ethanone, 2-(1H-imidazol-1-yl)-1-(2-naphthalenyl)-, monohydrobromide (9CI) (CA INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST ammonium borate deriv photolysis amine **photogeneration**; photolithog **photoresist** ammonium tetraorganylborate amine **photogeneration**
IT Electron transfer
(intramol., photochem.; **photogeneration** of tertiary amines in photolysis of ammonium tetraorganylborates via photoinduced electron transfer from triplet state)
IT Photolysis
Triplet state transition
(**photogeneration** of tertiary amines in photolysis of

ammonium tetraorganylborates via photoinduced electron transfer from triplet state)

IT **Photoresists**
(photolysis of ammonium tetraorganylborates designed to **photogenerate** tertiary amines for photolithog. applications in relation to)

IT Amines, properties
(tertiary; photolysis of ammonium tetraorganylborates designed to **photogenerate** tertiary amines for photolithog. applications)

IT 214074-78-9P, N-(2-Acetylnaphthone)-N,N,N-tributylammonium tetrafluoroborate 214074-82-5P, N-(2-Acetylbenzo[b]furan)-N,N,N-tributylammonium tetrafluoroborate 214074-86-9P, N-(2-Acetylbenzo[b]thiophene)-N,N,N-tributylammonium tetrafluoroborate
(control compd.; photolysis of ammonium tetraorganylborates designed to **photogenerate** tertiary amines for photolithog. applications)

IT 214074-76-7P, N-(2-Acetylnaphthone)-N,N,N-tributylammonium triphenylbutylborate 214074-77-8P, N-(2-Acetylnaphthone)-N,N,N-tributylammonium tetraphenylborate 214074-80-3P, N-(2-Acetylbenzo[b]furan)-N,N,N-tributylammonium triphenylbutylborate 214074-81-4P, N-(2-Acetylbenzo[b]furan)-N,N,N-tributylammonium tetraphenylborate 214074-84-7P, N-(2-Acetylbenzo[b]thiophene)-N,N,N-tributylammonium triphenylbutylborate 214074-85-8P, N-(2-Acetylbenzo[b]thiophene)-N,N,N-tributylammonium tetraphenylborate 376644-79-0P, N-(2-Acetylnaphthone)-N,N,N-triethylammonium tetraphenylborate **376644-80-3P**, N-(2-Acetylnaphthone)imidazole tetraphenylborate
(photolysis of ammonium tetraorganylborates designed to **photogenerate** tertiary amines for photolithog. applications)

IT 376644-76-7P, N-(2-Acetylnaphthone)-N,N,N-triethylammonium bromide **376644-77-8P**, N-(2-Acetylnaphthone)imidazole bromide
(reaction with sodium tetraphenylborate)

L44 ANSWER 4 OF 16 HCA COPYRIGHT 2006 ACS on STN
133:256818 Taste-**masked** medicinal compositions. Nakagami, Hiroaki; Suzuki, Tatsuya; Kobayashi, Hideo; Kurosawa, Akira (Daiichi Pharmaceutical Co., Ltd., Japan). PCT Int. Appl. WO 2000054811 A1 **20000921**, 32 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB,

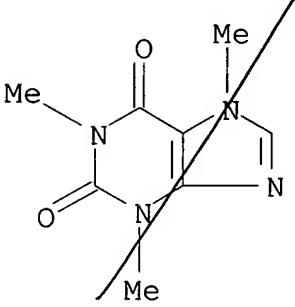
GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2000-JP1606 20000316. PRIORITY: JP 1999-72145 19990317.

AB This present invention relates to granular medicinal compns. contg. a drug having an offensive taste, a waxy substance and a sugar alc.; a process for producing the same and oral medicinal prepns. contg. these compns. Because of having an excellent effect of **masking** the offensive taste of the drug and a good feel in using, these prepns. can be easily taken by aged persons, children and patients with difficulty in swallowing. These prepns. are suitable for tube administration too.

IT **58-08-2**, Caffeine, biological studies **68-89-3**, Sulpyrine
(waxes and sugar alcs. for **masking** bitter taste of drugs)

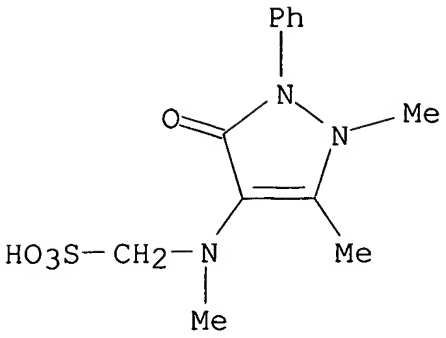
RN 58-08-2 HCA

CN 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9CI) (CA INDEX NAME)



RN 68-89-3 HCA

CN Methanesulfonic acid, [(2,3-dihydro-1,5-dimethyl-3-oxo-2-phenyl-1H-pyrazol-4-yl)methylamino]-, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM A61K047-10
ICS A61K047-30; A61K047-44; A61K009-14; A61K031-7048; A61K031-554; A61K031-5415; A61K031-704; A61K031-52; A61K031-522; A61K031-4402; A61K031-426; A61K031-5383; A61K031-4365

CC 63-6 (Pharmaceuticals)

ST drug bitter taste **masking** wax alditol

IT Fats and Glyceridic oils, biological studies
(animal; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Drug delivery systems
(granules; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Fats and Glyceridic oils, biological studies
(hydrogenated; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Alcohols, biological studies
Fatty acids, biological studies
(long-chain; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Drug delivery systems
(powders; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Fats and Glyceridic oils, biological studies
(vegetable; waxes and sugar alcs. for **masking** bitter taste of drugs)

IT Alditols
Glycerides, biological studies
Natural products, pharmaceutical
Polyoxyalkylenes, biological studies
Waxes
(waxes and sugar alcs. for **masking** bitter taste of

drugs)

IT 50-06-6, Phenobarbital, biological studies 50-33-9, Phenylbutazone, biological studies 50-70-4, Sorbitol, biological studies 50-98-6, Ephedrine hydrochloride 56-75-7, Chloramphenicol 57-50-1D, Sucrose, fatty acid esters **58-08-2**, Caffeine, biological studies 58-55-9, Theophylline, biological studies 58-73-1, Diphenhydramine 64-75-5, Tetracycline hydrochloride **68-89-3**, Sulpyrine 69-09-0, Chlorpromazine hydrochloride 87-99-0, Xylitol 98-96-4, Pirazinamid 103-90-2, Acetaminophen 113-52-0, Imipramine hydrochloride 113-92-8, Chlorpheniramine maleate 114-07-8, Erythromycin 125-69-9, Dextromethorphan hydrobromide 137-08-6, Calcium pantothenate 147-24-0, Diphenhydramine hydrochloride 149-32-6, Erythritol 304-20-1, Hydralazine hydrochloride 317-34-0, Aminophylline 318-98-9, Propranolol hydrochloride 364-62-5, Metoclopramide 536-33-4, Ethionamide 550-99-2, Naphazoline hydrochloride 585-88-6, Maltitol 633-65-8, Berberine chloride 657-27-2, L-Lysine hydrochloride 912-60-7, Noscapine hydrochloride 943-17-9, Etilefrine hydrochloride 1007-42-7 1937-19-5, Aminoguanidine hydrochloride 4330-99-8, Alimemazine tartrate 10592-13-9, Doxycycline hydrochloride 15595-35-4, Arginine hydrochloride 18067-13-5, N-Methylscopolamine methyl sulfate 18694-40-1, Epirizole 20830-75-5, Digoxin 25322-68-3, Polyethylene glycol 26328-04-1, Cinepazide maleate 26445-05-6, Aminopyridine 27724-96-5, Cetraxate hydrochloride 33286-22-5, Diltiazem hydrochloride 35035-05-3, Timepidium bromide 35941-71-0, Tiaramide hydrochloride 39878-70-1, Talampicillin hydrochloride 51481-61-9, Cimetidine 52315-76-1, L-Lysine acetate 62232-46-6, Bifemelane hydrochloride 65043-22-3, Indeloxazine hydrochloride 66357-59-3, Ranitidine hydrochloride 72956-09-3, Carvedilol 76824-35-6, Famotidine 76963-41-2, Nizatidine 77191-36-7, Nefiracetam 79307-93-0, Azelastine hydrochloride 81103-11-9, Clarithromycin 81789-85-7, Indenolol hydrochloride 82419-36-1, Ofloxacin 88069-49-2 93793-83-0, Roxatidine acetate hydrochloride 100986-85-4, Levofloxacin 104775-36-2, Ecabapide 120011-70-3, Donepezil hydrochloride 120202-66-6 144562-61-8

(waxes and sugar alcs. for **masking** bitter taste of drugs)

L44 ANSWER 5 OF 16 HCA COPYRIGHT 2006 ACS on STN

129:142619 Negative image recording material. Aoshima, Keitaro (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 854388 A2 **19980722**, 33 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1998-100883 19980120. PRIORITY: JP 1997-7532 19970120; JP 1997-39019 19970224.

AB The present invention provides a neg. image recording material which

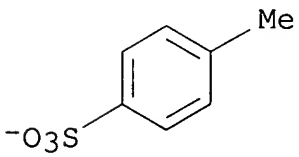
does not smudge nonimage areas during printing and provides excellent film strength of recorded image areas, and exhibits improved press life. Particularly when the material is used for recording with a variety of laser devices that emit IR rays, the material enables direct plate making from computer digital data. The neg. image recording material of the invention contains (A) a polymer having a heterocyclic group contg. an unsatd. bond therein, (B) a crosslinking agent that crosslinks with the aid of an acid, and (C) a compd. that generates an acid upon exposure to light or heat.

IT **6293-66-9 137308-86-2**
(neg. image recording materials for planog. printing plate prepn. contg.)

RN 6293-66-9 HCA
CN Iodonium, diphenyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

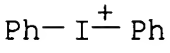
CM 1

CRN 16722-51-3
CMF C7 H7 O3 S



CM 2

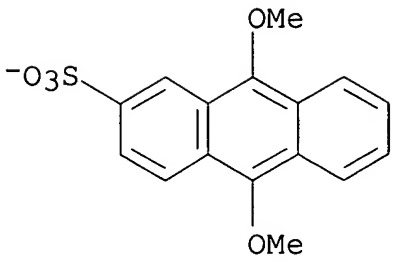
CRN 10182-84-0
CMF C12 H10 I



RN 137308-86-2 HCA
CN Iodonium, diphenyl-, salt with 9,10-dimethoxy-2-anthracenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

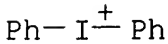
CM 1

CRN 137308-85-1
CMF C16 H13 O5 S



CM 2

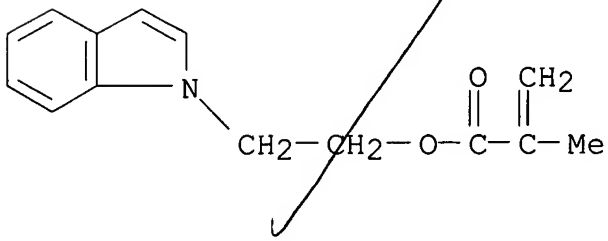
CRN 10182-84-0
CMF C12 H10 I



IT **210468-18-1P**
(prepn. and use in neg. image recording materials for planog. printing plate prepn.)
RN 210468-18-1 HCA
CN 2-Propenoic acid, 2-methyl-, polymer with 1-[(4-ethenylphenyl)methyl]-1H-imidazole and 2-(1H-indol-1-yl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

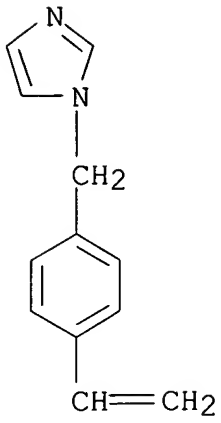
CM 1

CRN 210468-08-9
CMF C14 H15 N O2



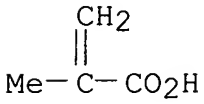
CM 2

CRN 78430-91-8
CMF C12 H12 N2



CM 3

CRN 79-41-4
CMF C4 H6 O2



IC ICM G03F007-038
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Negative **photoresists**
(contg. polymers having heterocyclic groups contg. unsatd. bonds and acid-generating compds.)
IT 615-93-0 623-27-8, 1,4-Benzenedialdehyde **6293-66-9**
70207-46-4 79637-86-8 134127-48-3 **137308-86-2**
161679-94-3 162846-57-3 210468-24-9
(neg. image recording materials for planog. printing plate prepn. contg.)
IT 210468-09-0P 210468-11-4P 210468-13-6P 210468-15-8P
210468-17-0P **210468-18-1P** 210468-20-5P 210468-21-6P
210468-23-8P
(prepn. and use in neg. image recording materials for planog. printing plate prepn.)

L44 ANSWER 6 OF 16 HCA COPYRIGHT 2006 ACS on STN
128:243959 Preparation of N-(2-nitrobenzyloxycarbonyl) cyclic amines as **photo** base **generating** agents for **resists**
. Yagihashi, Fujio; Kiyomori, Ayumi; Iwasaki, Tomoyuki; Hatakeyama, Jun (Shin-Etsu Chemical Industry Co., Ltd., Japan). Jpn. Kokai

Tokkyo Koho JP 10077264 A2 **19980324** Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-255501 19960905.

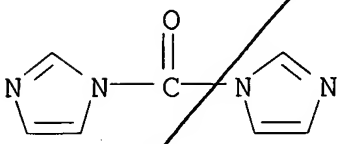
GI For diagram(s), see printed CA Issue.

AB Title compds. I (m = 5, 6; n = 0-2), useful as **photo** base **generating** agents for **resists** (no data), are prepd. by reaction of N,N'-carbonyldiimidazole with 2-NO2C6H4CH2OH and reaction with cyclic amines II (m, n = same as I). N,N'-carbonyldiimidazole was esterified with 2-NO2C6H4CH2OH in DMF at 0-5.degree. for 1 h and amidated with pyrrolidine in DMF at room temp. for 4 h to give 92% N-(2-nitrobenzyloxycarbonyl)pyrrolidine.

IT **530-62-1**, N,N'-Carbonyldiimidazole
(prepn. of benzyloxycarbonyl cyclic amines by esterification of carbonyldiimidazole with alc. and amidation with cyclic amines)

RN 530-62-1 HCA

CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



IC ICM C07D207-06
ICS C07D211-16; C07D295-20

CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 74

ST carbonyldiimidazole esterification nitrobenzyl alc; benzyloxycarbonylimidazole amidation cyclic amine; benzyloxycarbonyl cyclic amine prepn; pyrrolidine amidation benzyloxycarbonylimidazole; benzyloxycarbonylpyrrolidine prepn base generator **resist**

IT **Photoresists**
(prepn. of nitrobenzyloxycarbonyl cyclic amines as **photo** base **generating** agents for **resists**)

IT 123-75-1, Pyrrolidine, reactions **530-62-1**, N,N'-Carbonyldiimidazole 612-25-9, 2-Nitrobenzyl alcohol 35794-11-7, 3,5-Dimethylpiperidine
(prepn. of benzyloxycarbonyl cyclic amines by esterification of carbonyldiimidazole with alc. and amidation with cyclic amines)

L44 ANSWER 7 OF 16 HCA COPYRIGHT 2006 ACS on STN

128:243832 Preparation of 2-nitrobenzyl N,N-dialkylcarbamates as **photo** base-**generating** agents for **photoresists**. Yagihashi, Fujio; Kiyomori, Ayumi; Iwasaki, Tomoyuki; Hatakeyama, Jun (Shin-Etsu Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10077257 A2 **19980324** Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-255500 19960905.

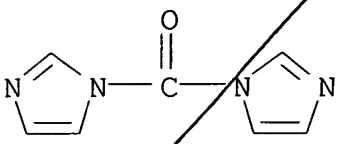
AB Title compds. 2-O2NC6H4CH2O2CNR1R2 (I, R1 = C1-4 linear alkyl; R2 =

C4-18 alkyl, cycloalkyl), useful as **photo** base-**generating** agents for **photoresists** (no data), are prepd. by reaction of N,N'-carbonyldiimidazole with 2-nitrobenzyl alc. and reaction with HNR1R2 (R1, R2 = same as I). N,N'-carbonyldiimidazole was treated with 2-nitrobenzyl alc. in DMF at 0-5.degree. for 1 h and condensed with HNMe(CH2)5Me in DMF at room temp. for 12 h to give 78% I [R1 = Me, R2 = (CH2)5Me].

IT **530-62-1**, N,N'-Carbonyldiimidazole
(prepn. of nitrobenzyl carbamates by esterification of carbonyldiimidazole with alc and amidation with amines)

RN 530-62-1 HCA

CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



IC ICM C07C271-12
ICS C07C269-04; C07C271-24

CC 25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 74

ST carbonyldiimidazole esterification nitrobenzyl alc; nitrobenzyloxycarbonylimidazole amidation amine; nitrobenzyl alkylcarbamate prepn base generator **photoresist**

IT **Photoresists**
(prepn. of nitrobenzyl dialkylcarbamates as **photo** base-**generating** agents for **photoresists**)

IT 100-60-7, N-Methylcyclohexylamine **530-62-1**, N,N'-Carbonyldiimidazole 612-25-9, 2-Nitrobenzyl alcohol 7311-30-0, N-Methyl-n-dodecylamine 35161-70-7, N-Methyl-n-hexylamine
(prepn. of nitrobenzyl carbamates by esterification of carbonyldiimidazole with alc and amidation with amines)

L44 ANSWER 8 OF 16 HCA COPYRIGHT 2006 ACS on STN

124:41077 Chain Amplified **Photoacid** Generation from Vicinal Dibromides. A General Strategy for the Efficient Generation of Hydrogen Bromide across the Ultraviolet and Visible Spectrum. Scaiano, J. C.; Barra, Monica; Sinta, Roger (Department of Chemistry, University of Ottawa, Ottawa, ON, K1N 6N5, Can.). Chemistry of Materials, 8(1), 161-6 (English) **1996**. CODEN: CMATEX. ISSN: 0897-4756. Publisher: American Chemical Society.

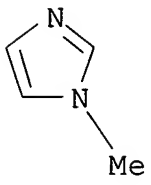
AB Vicinal dibromides are efficient HBr **photogenerators** that have found application in several acid-hardened **photoresists**. In this report we describe the photodecompn. of vicinal

dibromides as a general chain reaction for HBr generation; a reaction that propagates in the presence of many substrates (i.e., alcs., amines, sulfides) having the correct hydrogen-donor and reducing properties. In addn., we show that entry into the chain propagation steps of these reactions can be photoinduced by numerous initiation processes (e.g., hydrogen abstraction, fragmentation, electron transfer). Thus, provided a suitable photoinitiator is identified, it is possible to not only amplify the acid generation process but also use vicinal dibromides as **photoacid** generators across the UV and visible spectrum (and possibly the near IR).

IT **616-47-7**, 1-Methylimidazole
(rate consts. for reaction of bromine atoms in acetonitrile at room temp.)

RN 616-47-7 HCA

CN 1H-Imidazole, 1-methyl- (9CI) (CA INDEX NAME)



As substrate

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photoacid** generation vicinal dibromide **photoresist** lithog; photolysis acid generation vicinal dibromide **photoresist**

IT Photolysis catalysts
(photoinitiators for decompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)

IT Photolysis
(flash, photolysis study of photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)

IT **Resists**
(photo-, photolysis study of photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)

IT Abstraction reaction
(photochem., of hydrogen; photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)

IT Electron exchange and Charge transfer
(photochem., photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist**

applications)
IT 121-44-8, Triethylamine, processes
(chain carrier; photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 67-56-1, Methanol, processes 67-63-0, 2-Propanol, processes
(hydrogen donor; photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 872-05-9, 1-Decene
(photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 102-86-3, Trihexylamine 7087-68-5, Diisopropylethylamine
(photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 10035-10-6, Hydrobromic acid, processes
(photolysis study of photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 106-93-4, 1,2-Dibromoethane 126-72-7, Tris(2,3-dibromopropyl)phosphate 28467-71-2, 1,2-Dibromodecane 52434-90-9, Tris(2,3-dibromopropyl)isocyanurate
(photolysis study of photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 67-64-1, Acetone, processes 91-20-3, Naphthalene, processes 129-00-0, Pyrene, processes 198-55-0, Perylene 517-51-1, Rubrene 947-19-3, Irgacure 184 7473-98-5, Darocur 1173 16423-68-0, Erythrosin B 62796-23-0, Merocyanine 540 71868-10-5, Irgacure 907 119313-12-1, Irgacure 369
(photosensitizer; photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 119-61-9, Benzophenone, processes 5495-84-1, 2-Isopropylthioxanthone
(photosensitizer; photolysis study of photodecompn. of vicinal dibromides as chain reaction for hydrobromic acid generation for **photoresist** applications)
IT 91-66-7, N,N-Diethylaniline 100-74-3, Ethylmorpholine 100-76-5, Quinuclidine 110-89-4, Piperidine, processes 110-91-8, Morpholine, processes 111-47-7, Dipropyl sulfide **616-47-7**, 1-Methylimidazole 766-09-6, 1-Ethylpiperidine
(rate consts. for reaction of bromine atoms in acetonitrile at room temp.)

L44 ANSWER 9 OF 16 HCA COPYRIGHT 2006 ACS on STN

121:191356 Positive-working **photoresist** material containing organic dehydrating agent. Tanaka, Haruyori; Kawai, Yoshio; Matsuda, Korehito (Nippon Telegraph & Telephone, Japan). Jpn. Kokai Tokkyo Koho JP 06043652 A2 **19940218** Heisei, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-218700 19920727.

AB The material comprises a base polymer, an acid-generator, and a dissoln. inhibitor RN:C:NR1 (R, R1 = hydrocarbyl, arom. or R2COR3 where R2, R3 = (N-contg.) hydrocarbyl, arom.). The material shows high sensitivity to far-UV, electron beam, and x-ray.

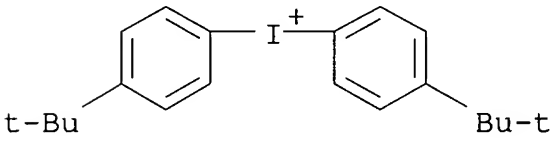
IT **84563-54-2 115298-63-0 116808-67-4 141801-36-7 154093-56-8 154093-57-9 157760-01-5**
(**photoresist** contg. acid-generator of, dissoln. inhibitors for)

RN 84563-54-2 HCA

CN Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

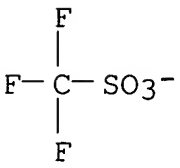
CM 1

CRN 61267-44-5
CMF C20 H26 I



CM 2

CRN 37181-39-8
CMF C F3 O3 S

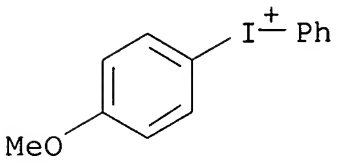


RN 115298-63-0 HCA

CN Iodonium, (4-methoxyphenyl)phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

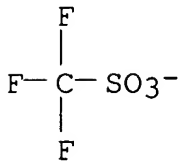
CM 1

CRN 46441-20-7
CMF C13 H12 I O



CM 2

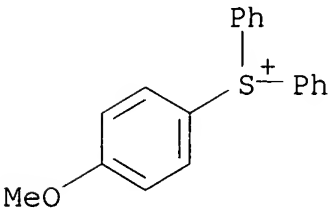
CRN 37181-39-8
CMF C F3 O3 S



RN 116808-67-4 HCA
CN Sulfonium, (4-methoxyphenyl)diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

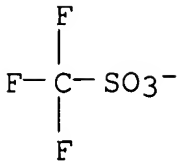
CM 1

CRN 70084-23-0
CMF C19 H17 O S



CM 2

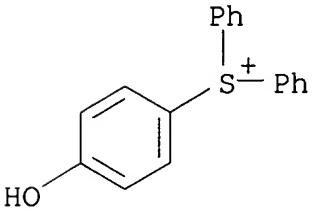
CRN 37181-39-8
CMF C F3 O3 S



RN 141801-36-7 HCA
CN Sulfonium, (4-hydroxyphenyl)diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

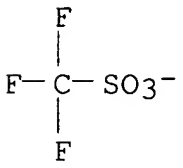
CM 1

CRN 108493-51-2
CMF C18 H15 O S



CM 2

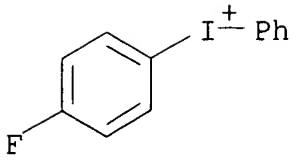
CRN 37181-39-8
CMF C F3 O3 S



RN 154093-56-8 HCA
CN Iodonium, (4-fluorophenyl)phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

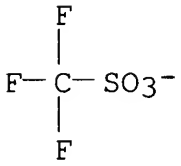
CM 1

CRN 123105-26-0
CMF C12 H9 F I



CM 2

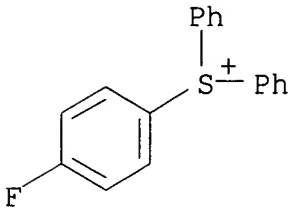
CRN 37181-39-8
CMF C F3 O3 S



RN 154093-57-9 HCA
CN Sulfonium, (4-fluorophenyl)diphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

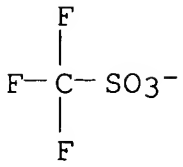
CM 1

CRN 70084-25-2
CMF C18 H14 F S



CM 2

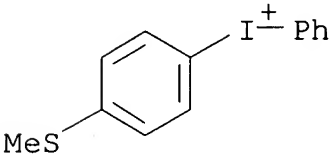
CRN 37181-39-8
CMF C F3 O3 S



RN 157760-01-5 HCA
CN Iodonium, [4-(methylthio)phenyl]phenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

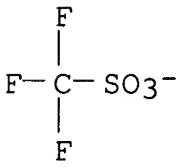
CM 1

CRN 157760-00-4
CMF C13 H12 I S

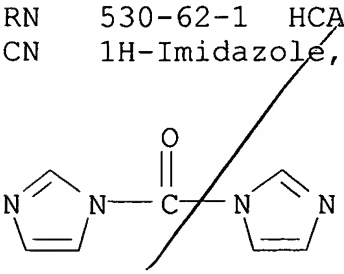


CM 2

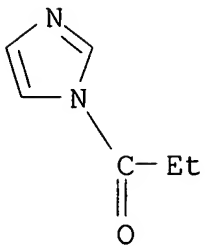
CRN 37181-39-8
CMF C F3 O3 S



IT **530-62-1**, N, N'-Carbonyldiimidazole **4122-52-5**
(**photoresist** contg. dissoln. inhibitor of)
RN 530-62-1 HCA
CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



RN 4122-52-5 HCA
CN 1H-Imidazole, 1-(1-oxopropyl)- (9CI) (CA INDEX NAME)



IC ICM G03F007-039
ICS G03F007-004; G03F007-029; H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **photoresist** pos dissoln inhibitor ketone; lithog imide pos **resist** dissoln inhibitor
IT **Resists**
(photo-, pos.-working, contg. ketone or imide dissoln. inhibitor)
IT **Resists**
(radiation-sensitive, pos.-working, ketone or imide dissoln. inhibitors for)
IT **84563-54-2 115298-63-0 116808-67-4 141801-36-7 154093-56-8 154093-57-9 157760-01-5**
(**photoresist** contg. acid-generator of, dissoln. inhibitors for)
IT **530-62-1**, N, N'-Carbonyldiimidazole 538-75-0, Dicyclohexyl carbodiimide 2387-23-7 **4122-52-5** 4824-76-4 117458-06-7 118812-83-2 156184-10-0 156184-11-1 156184-12-2 156184-13-3 156184-14-4 156184-15-5
(**photoresist** contg. dissoln. inhibitor of)

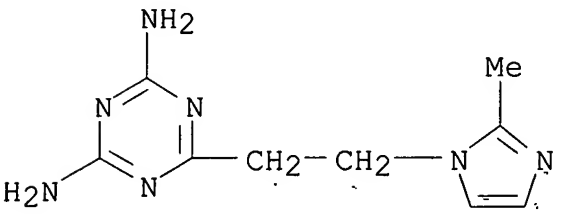
L44 ANSWER 10 OF 16 HCA COPYRIGHT 2006 ACS on STN
121:136285 Epoxy resin-based solder **resist** compositions and cured **resists**. Yokoshima, Minoru; Ookubo, Tetsuo; Sasahara, Kazunori (Nippon Kayaku Kk, Japan). Jpn. Kokai Tokkyo Koho JP 06049402 A2 **19940222** Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-226509 19920804.
AB The solder **resist** compns. consist of epoxy resins contg. naphthalene groups, hardeners selected from dicyandiamide, imidazoles, triazines, ureas, arom. amines, and cationic photopolymn. catalysts, and solvents R1(OR2)nOR3 (R1 = H, C1-8 alkyl; R2 = ethylene, propylene; R3 = H, C2-9 acyl; n = 1-4) and/or solvent naphtha. One such compn. contained an epoxy resin derived from 1- and 2-naphthol, formaldehyde and epichlorohydrin, 8 phr dicyandiamide, 6 phr 2,4-diamino-6-[2-(2-methylimidazol-1-yl)ethyl]-

s-triazine, 30 phr Carbitol acetate and 10 phr solvent naphtha. The compn. was sol. in toluene and had good hardness, adhesion, heat resistance and chem. resistance.

IT **38668-46-1**, 2,4-Diamino-6-[2-(2-methylimidazol-1-yl)ethyl]-s-triazine **125054-47-9**, SP-170
(hardener, naphtholic epoxy solder **resist** compns. contg.)

RN 38668-46-1 HCA

CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



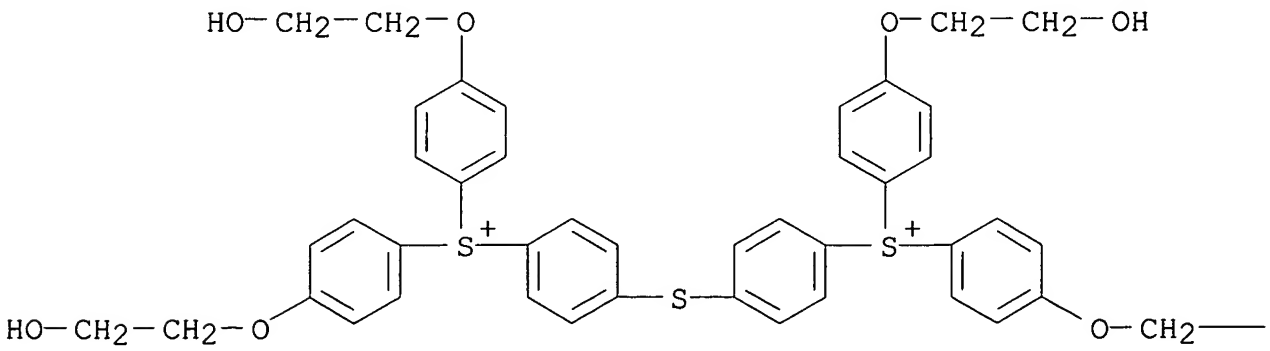
RN 125054-47-9 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

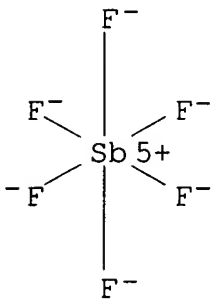


PAGE 1-B

—CH_2—OH

CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS



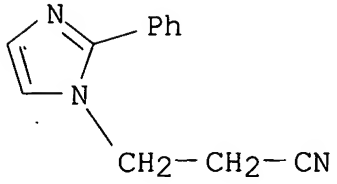
IC ICM C09D011-10
ICS C09D011-10
ICA C08G059-20
CC 42-9 (Coatings, Inks, and Related Products)
ST epoxy resin solder **resist**
IT Solvent naphtha
(naphtholic epoxy solder **resist** compns. contg.)
IT Epoxy resins, preparation
(naphthalene group-contg., prepn. of, for solder **resist** compns.)
IT **Resists**
(solder, naphthalene group-contg. epoxy resin compns.)
IT 461-58-5, Dicyandiamide 931-36-2, 2-Ethyl-4-methylimidazole **38668-46-1**, 2,4-Diamino-6-[2-(2-methylimidazol-1-yl)ethyl]-s-triazine **125054-47-9**, SP-170

(hardener, naphtholic epoxy solder **resist** compns. contg.)
IT 112-15-2, Carbitol acetate
(naphtholic epoxy solder **resist** compns. contg.)
IT 4995-94-2P 149424-43-1P 149615-20-3P
(prepn. and reaction with epichlorohydrin, in manuf. of solder **resist** compns.)
IT 5386-25-4P
(prepn. and reaction with naphthol or xylenol, in manuf. of solder **resist** compns.)
IT 4397-13-1P
(prepn. and reaction with naphthol, in manuf. of solder **resist** compns.)
IT 149581-52-2P 149615-17-8P 156863-23-9P 156863-24-0P
157177-57-6P 157177-58-7P 157177-59-8P 157177-60-1P
(prepn. of, for solder **resist** compns.)
IT 149424-46-4P
(prepn. of, in manuf. of solder **resist** compns.)
IT 576-26-1, 2,6-Xylenol
(reaction of, in manuf. of solder **resist** compns.)
IT 105-67-9, 2,4-Xylenol 135-19-3, 2-Naphthol, reactions
(reaction of, with formaldehyde, in manuf. of solder **resist** compns.)
IT 90-15-3, 1-Naphthol
(reaction of, with methylolated naphthol, in manuf. of solder **resist** compns.)
IT 106-89-8, Epichlorohydrin, reactions
(reaction of, with naphthol derivs., in manuf. of solder **resist** compns.)
IT 50-00-0, Formaldehyde, reactions
(reaction of, with naphthol or xylenol, in manuf. of solder **resist** compns.)

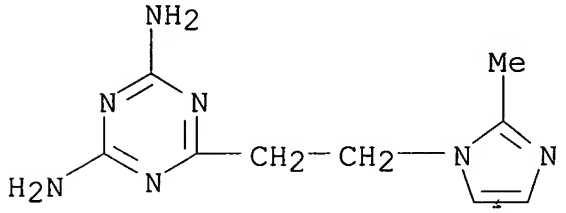
L44 ANSWER 11 OF 16 HCA COPYRIGHT 2006 ACS on STN
121:123027 Photo-curing **resist** compositions, and manufacture of printed circuit boards therewith and printed circuit boards. Imabayashi, Shinichiro; Kikuchi, Hiroshi; Watabe, Makio; Tanaka, Isamu; Yano, Reiko; Oka, Hitoshi; Taniguchi, Yukihiro (Hitachi Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 05194686 A2 **19930803** Heisei, 25 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-9790 19920123.
AB The compn. contains multiple radical unsatd. compd(s). solid at the room temp., photo-polymn. initiator(s), hardener(s) for epoxy resin, and melamine or its deriv, or dicyandiamide.
IT **23996-12-5**, 1-(2-Cyanoethyl)-2-phenylimidazole
38668-46-1 38668-46-1D, adduct compd. with isocyanuric **acid 50729-75-4 50729-78-7**
87450-14-4 96735-95-4

(**photo**-curing **resist** compns. contg.)

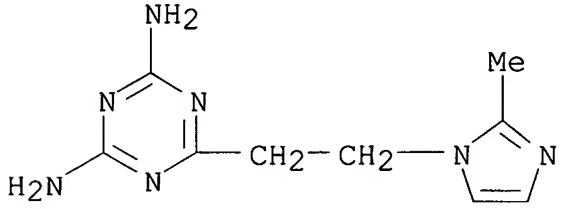
RN 23996-12-5 HCA
CN 1H-Imidazole-1-propanenitrile, 2-phenyl- (9CI) (CA INDEX NAME)



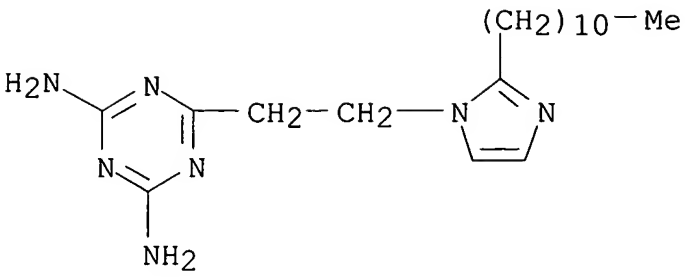
RN 38668-46-1 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



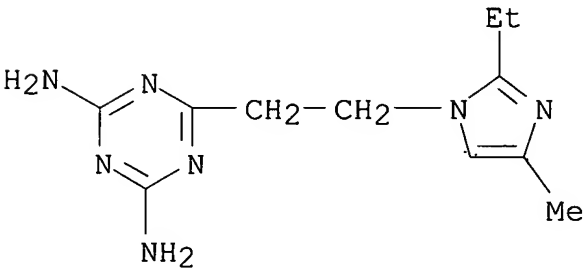
RN 38668-46-1 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



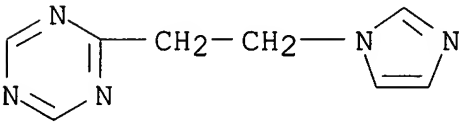
RN 50729-75-4 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-undecyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



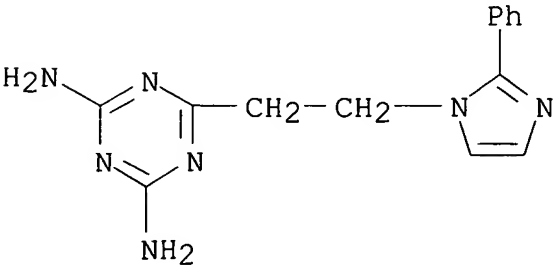
RN 50729-78-7 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-ethyl-4-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



RN 87450-14-4 HCA
CN 1,3,5-Triazine, 2-[2-(1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



RN 96735-95-4 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-phenyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)

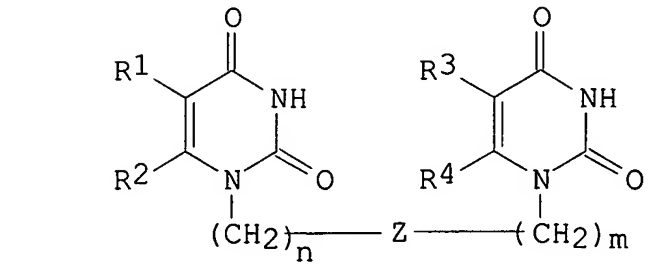


IC ICM C08F299-02
ICS C08G059-17; C08G059-40; G03F007-004; G03F007-027; G03F007-038
ICA H05K003-28; H05K003-42
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38, 74
ST epoxy resin **resist** compn; melamine **resist** compn; dicyandiamide **resist** compn; printed circuit board **resist**
IT Epoxy resins, uses
(acrylic, bisphenol A-based, photo-curing **resist** compns. contg.)
IT Acrylic polymers, uses
(epoxy, bisphenol A-based, photo-curing **resist** compns. contg.)
IT Electric circuits
(printed, boards, photo-curing **resist** compns. for manuf. of)
IT Epoxy resins, uses
(vinyl group-contg., photo-curing **resist** compns. contg.)
IT 79-10-7, 2-Propenoic **acid**, uses 88-58-4 90-94-8, 4,4'-Bis(N,N'-dimethylamino)benzophenone 91-76-9, 2,4-Diamino-6-phenyl-s-triazine 101-77-9, 4,4'-Diaminodiphenylmethane 108-77-0, Cyanur chloride 108-78-1, 1,3,5-Triazine-2,4,6-triamine, uses 108-80-5D, Isocyanuric acid, adduct compd. with 2,4-diamino-6(2'-methylimidazole-(1'))ethyl-s-triazine 119-61-9, Benzophenone, uses 121-69-7, N,N-Dimethylaniline, uses 123-31-9, 1,4-Benzenediol, uses 461-58-5 542-02-9, 2,4-Diamino-6-methyl-s-triazine 645-92-1, 2,4-Diamino-6-hydroxy-s-triazine 645-93-2 670-96-2, 2-Phenylimidazole 931-36-2, 2-Ethyl-4-methylimidazole 1072-62-4, 2-Ethylimidazole 3253-41-6, Pentaerythritol tetramethacrylate 7673-09-8, Trichloromelamine 10287-53-3, Ethyl p-dimethylaminobenzoate 15625-89-5, Trimethylolpropane acrylate 17584-12-2, 3-Amino-5,6-dimethyl-1,2,4-triazine 22499-11-2, Benzoinbutylether **23996-12-5**, 1-(2-Cyanoethyl)-2-phenylimidazole 25068-38-6, Epikote 1001 29570-58-9, Dipentaerythritol hexaacrylate 37370-68-6, ECN 1273 **38668-46-1 38668-46-1D**, adduct compd. with isocyanuric **acid 50729-75-4 50729-78-7** 82799-44-8, 2,4-Diethylthioxanthone 84778-06-3, Epikote 152 **87450-14-4 96735-95-4** 146441-08-9 156378-30-2
(**photo**-curing **resist** compns. contg.)

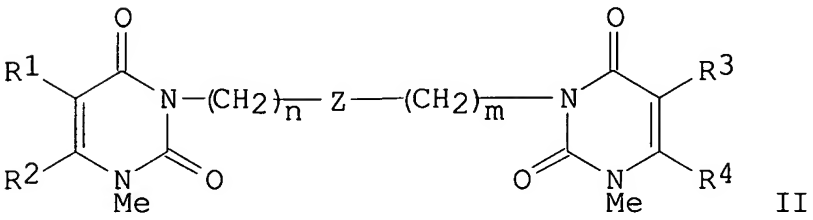
L44 ANSWER 12 OF 16 HCA COPYRIGHT 2006 ACS on STN
117:17325 Photosensitive resin composition containing poly(vinylphenol) and pyrimidine copolymer for deep ultraviolet light. Takemoto,

Kiichi; Inagi, Yoshiaki; Yoshida, Yasuhiro; Fujioka, Hirofumi (Mitsubishi Electric Corp., Japan). Jpn. Kokai Tokkyo Koho JP 03296060 A2 **19911226** Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-98796 19900413.

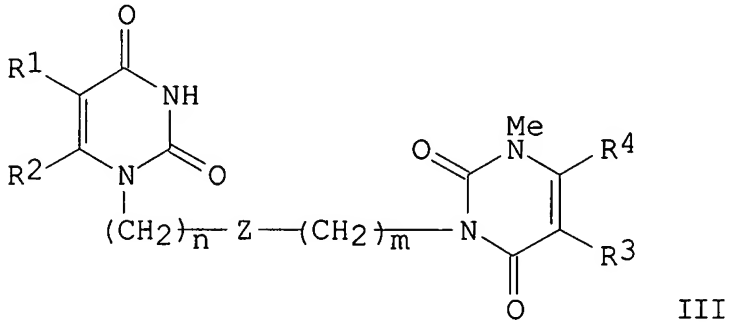
GI



I



II



III

AB The photosensitive compn. comprises poly(vinylphenol) and a polymer contg. a photodimerization product of >1 compd. selected from I, II, and III (R1-4 = H, CN, F, Cl, Br, Me, Z = org. group with mol. wt. .ltoreq.1000; n, m = 1-4) in the main chain. The compn. has less absorption of deep-UV and high dissoln. inhibition effect and gives high-resoln. images.

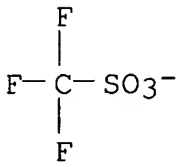
IT **66003-78-9 141797-37-7**
(acid-generating agent, for deep-UV **photoresists**)

RN 66003-78-9 HCA

CN Sulfonium, triphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

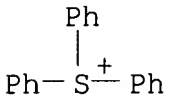
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

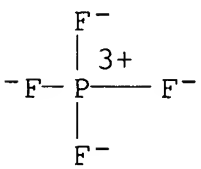
CRN 18393-55-0
CMF C18 H15 S



RN 141797-37-7 HCA
CN Iodonium, diphenyl-, tetrafluorophosphate(1-) (9CI) (CA INDEX NAME)

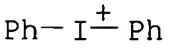
CM 1

CRN 25443-47-4
CMF F4 P
CCI CCS



CM 2

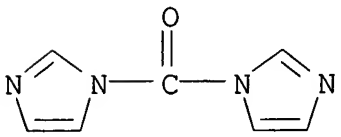
CRN 10182-84-0
CMF C12 H10 I



IT **141789-12-0**
(photosensitive dissoln. inhibitor, for poly(vinylphenol) deep-UV **photoresists**)
RN 141789-12-0 HCA
CN 2,4(1H,3H)-Pyrimidinedione, 3-(2-hydroxyethyl)-1-methyl-, dimer, polymer with 1,1'-carbonylbis[1H-imidazole] (9CI) (CA INDEX NAME)

CM 1

CRN 530-62-1
CMF C7 H6 N4 O

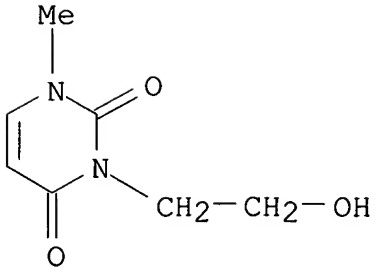


CM 2

CRN 141789-11-9
CMF (C7 H10 N2 O3)2
CCI PMS

CM 3

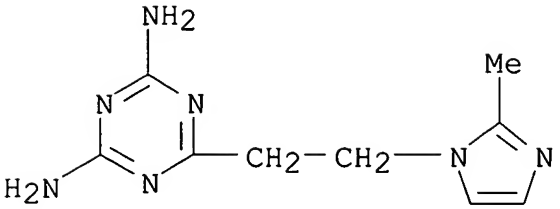
CRN 1127-64-6
CMF C7 H10 N2 O3



IC ICM G03F007-039
ICS H01L021-027
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST photosensitive resin polyvinylphenol deep UV; pyrimidine copolymer dissoln inhibitor **photoresist**

IT Semiconductor devices
(deep-UV **photoresists** contg. poly(vinylphenol) and pyrimidine copolymers for fabrication of)
IT Polyamides, uses
Polycarbonates, uses
Urethane polymers, uses
(photosensitive dissoln. inhibitors, for poly(vinylphenol) deep-UV **photoresists**)
IT **Resists**
(photo-, deep-UV, contg. poly(vinylphenol) and pyrimidine copolymers)
IT **66003-78-9 141797-37-7**
(acid-generating agent, for deep-UV **photoresists**)
IT 822-06-0D, Hexamethylene diisocyanate, copolymers with uracil or thymine dimers 41575-25-1D, dimerization products, copolymer with hexamethylene diisocyanate 89009-99-4D, dimerization products, copolymer with hexamethylene diisocyanate 122353-48-4D, dimerization products, copolymer with hexamethylene diisocyanate 141789-09-5 141789-10-8 **141789-12-0** 141789-14-2 141789-15-3 141789-18-6 141888-03-1
(photosensitive dissoln. inhibitor, for poly(vinylphenol) deep-UV **photoresists**)
IT 59269-51-1, Polyvinylphenol
(pos.-working **photoresists** contg. pyrimidine copolymers and)

L44 ANSWER 13 OF 16 HCA COPYRIGHT 2006 ACS on STN
115:161392 Solder **resist** inks and their hardened products.
Yokoshima, Minoru; Nawata, Kazumitsu; Okubo, Tetsuo (Nippon Kayaku Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03095281 A2 **19910419** Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-231768 19890908.
AB The title inks with good discoloration prevention contain the epoxy resins Me(p-C6H4OCH2Y)2CC6H4-p-CMe2-p-C6H4OCH2Y (Y = glycidyl). Thus, screen printing a compn. contg. VG 3101, dicyandiamide, and 2,4-diamino-6-[2'-methylimidazol-1]-ethyl-s-triazine on a printed circuit board and curing at 150.degree. for 0.5 h gave a film showing good chem. (10% NaOH soln., 30 days, or 10 vol% H2SO4 soln. 48 h), heat (260.degree., 180 s), and bleed (.ltoreq.25 .mu.m) resistance, resistivity 0.9 .times. 1011 .OMEGA. (JIS Z 3197), and discoloration resistance (150.degree., 1 h).
IT **38668-46-1 125054-47-9**, SP 170
(catalysts, for glycidoxybisphenyl(diglycidoxyphenyl)methane-based epoxy inks, for printed circuit boards)
RN 38668-46-1 HCA
CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)

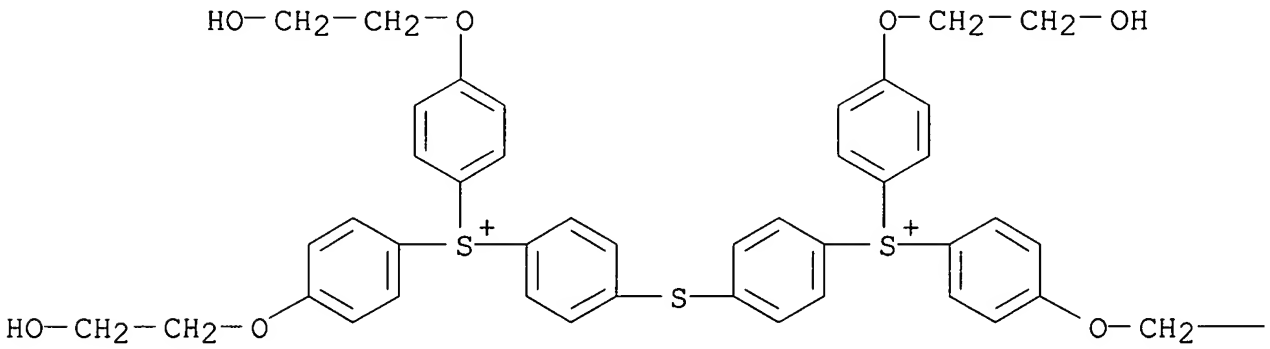


RN 125054-47-9 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

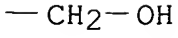
CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

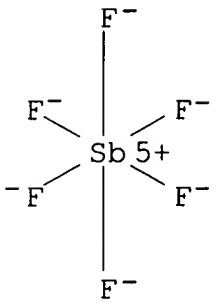


PAGE 1-B



CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS



IC ICM C09D011-10
ICS C09D011-02
CC 42-12 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
IT **Resists**
(solder, glycidoxybisphenyl(diglycidoxyphenyl) methane-based epoxy resins for, discoloration-resistant)
IT 330-54-1 931-36-2, 2-Ethyl-4-methyl imidazole **38668-46-1**
51839-50-0, Kayahard A-S **125054-47-9**, SP 170
(catalysts, for glycidoxybisphenyl(diglycidoxyphenyl)methane-based epoxy inks, for printed circuit boards)

L44 ANSWER 14 OF 16 HCA COPYRIGHT 2006 ACS on STN
113:181467 UV- and heat-curable epoxy resin compositions as **resists** for printed circuit boards. Ohashi, Yoshinobu; Takeyama, Shuichi; Honjo, Keiichi (Yokohama Rubber Co., Ltd., Japan)
Jpn. Kokai Koho JP 02127418 A2 **19900516**
CODEN: JKXXAF. APPLICATION: JP

AB The title compns. comprise 100 parts epoxy resins, 0.5-10 parts photopolymn. initiators, and 0.5-10 parts imidazoles selected from primary amino-free imidazolium trimellitates, 2-methylimidazolium isocyanurate, and bisimidazoles I [Z = CO, CO(CH2)nCO; n .gtoreq.1]. Thus, a compn. of Epiclon 850S (bisphenol A-based epoxy resin) 40, Sumiepoxy ESA 011 15, Sumiepoxy ESA 014 15, ERL 4206 30, Taranox (SiO2) 6, SP 170 (arom. **sulfonium** salt) 5, and Curezol 2MZ-OK (II) 1 part was applied on a glass plate at 360 .mu.m and irradiated by UV at 1000 mJ/cm2 to show cured thickness 250 .mu.m, whereas the compn. contg. 5 parts Curezol 2MA-OK instead of II did not cure.

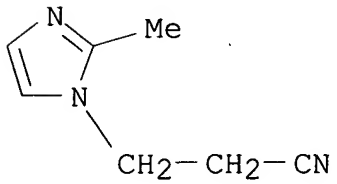
IT **49556-76-5**
(crosslinking catalysts, Curezol 2MZ-CNS, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)

RN 49556-76-5 HCA

CN 1,2,4-Benzenetricarboxylic acid, compd. with 2-methyl-1H-imidazole-1-propanenitrile (1:1) (9CI) (CA INDEX NAME)

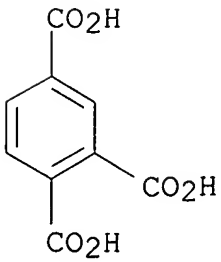
CM 1

CRN 23996-55-6
CMF C7 H9 N3

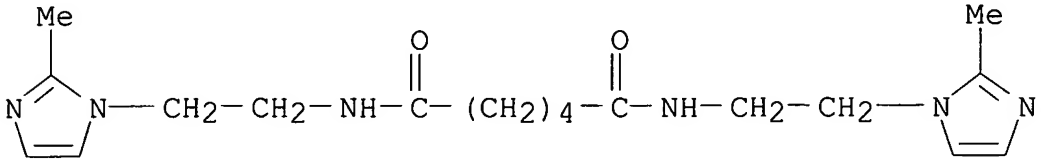


CM 2

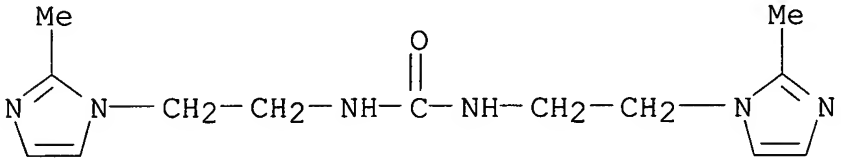
CRN 528-44-9
CMF C9 H6 O6



IT **117149-99-2**
(crosslinking catalysts, Curezol AMZ-ADP, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
RN 117149-99-2 HCA
CN Hexanediamide, N,N'-bis[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



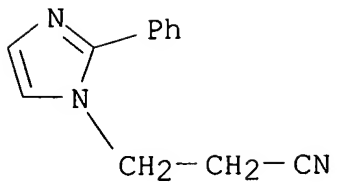
IT **114881-11-7**
(crosslinking catalysts, Curezol AMZ-CO, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
RN 114881-11-7 HCA
CN Urea, N,N'-bis[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



IT **68083-35-2**, Curezol 2PZ-CNS
(crosslinking catalysts, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
RN 68083-35-2 HCA
CN 1,2,4-Benzenetricarboxylic acid, compd. with 2-phenyl-1H-imidazole-1-propanenitrile (1:1) (9CI) (CA INDEX NAME)

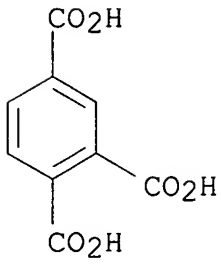
CM 1

CRN 23996-12-5
CMF C12 H11 N3



CM 2

CRN 528-44-9
CMF C9 H6 O6

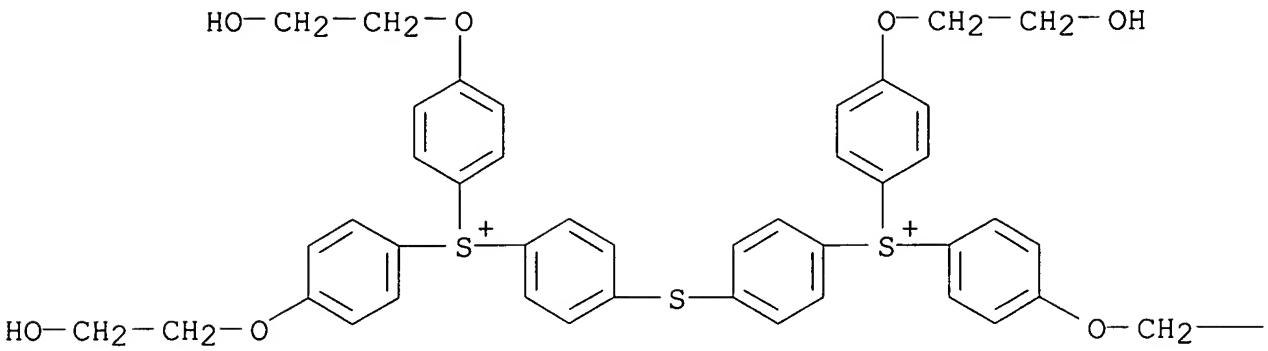


IT **125054-47-9**, SP 170 (photoinitiator)
(photopolymn. initiator, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
RN 125054-47-9 HCA
CN Sulfonium, (thiodi-4,1-phenylene)bis[bis[4-(2-hydroxyethoxy)phenyl]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] (9CI) (CA INDEX NAME)

CM 1

CRN 106220-69-3
CMF C44 H44 O8 S3

PAGE 1-A

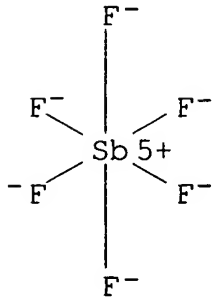


PAGE 1-B

— CH_2 — OH

CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS



IC ICM C08G059-40
ICS C08G059-18; C08L063-00
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76
ST UV curable epoxy resin **resist**; photocurable epoxy resin **resist**; thermosetting epoxy resin **resist**; imidazole crosslinking catalyst epoxy **resist**; printed circuit board **resist** epoxy
IT Epoxy resins, uses and miscellaneous
(contg. imidazoles, photocurable or thermosetting, as **resists** for printed circuit boards)
IT Crosslinking catalysts
(imidazoles, for photocurable or thermosetting epoxy resins, as **resists** for printed circuit boards)
IT **Resists**
(photo-, with imidazole-contg. photocurable or thermosetting epoxy resins)
IT Electric circuits
(printed, boards, **resists** for, photocurable or thermosetting epoxy resin compns. for)
IT **49556-76-5**
(crosslinking catalysts, Curezol 2MZ-CNS, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
IT **117149-99-2**
(crosslinking catalysts, Curezol AMZ-ADP, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
IT **114881-11-7**
(crosslinking catalysts, Curezol AMZ-CO, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
IT **68083-35-2**, Curezol 2PZ-CNS 68490-68-6, Curezol 2MZ-OK
(crosslinking catalysts, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
IT **125054-47-9**, SP 170 (photoinitiator)
(photopolymn. initiator, epoxy resin **resists** contg., photocurable or thermosetting, for printed circuit boards)
IT 25068-38-6 25085-99-8, Epiclon 850S 25086-25-3, ERL 4206
(**resists** contg., photocurable or thermosetting, for printed circuit boards)

L44 ANSWER 15 OF 16 HCA COPYRIGHT 2006 ACS on STN
112:66778 Photosensitive epoxy resin compositions for solder **resist** of printed circuit board. Watabe, Makio; Tanaka, Isamu; Kikuchi, Hiroshi; Oka, Hitoshi (Hitachi, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01197520 A2 **19890809** Heisei, 8 pp.

(Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-21942 19880203.

AB Title compn. comprises diallyl phthalate prepolymer, a multifunctionalized unsatd. compd., a radical photopolymn. initiator, an epoxy resin, a cationic photopolymn. initiator, and a hardener. The compn. shows peeling resistance in impregnation with an alk. coating bath. Thus, a compn. comprising Daiso Dap, timethylolpropane trimethacrylate, Epikote 142, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-propanone, Et cellosolve, phthalocyanine green, a silicone oil, dicayndiamide, 2,4-diamino-6-[2'-methylimidazole-(1')]ethyl-s-triazine, and bis[4-(diphenylsulfonio)phenyl]sulfide bishexafluorophosphate was screen-printed onto a circuit board, dried, neg. patterned by UV irradn., spray developed by CCl3CH3, and heated to give a solder **resist**-coated printed circuit, which was impregnated with an alk. Cu coating bath to show no peelings.

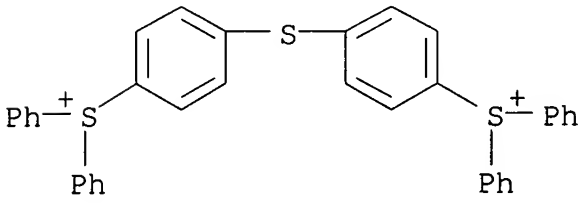
IT **74227-35-3**
(cationic photopolymn. initiator, for epoxy resin solder **photoresist**, for printed circuit board, with resistance against alk. coating bath)

RN 74227-35-3 HCA

CN Sulfonium, (thiodi-4,1-phenylene)bis[diphenyl-, bis[hexafluorophosphate(1-)] (9CI) (CA INDEX NAME)

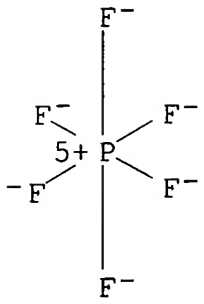
CM 1

CRN 74227-34-2
CMF C36 H28 S3



CM 2

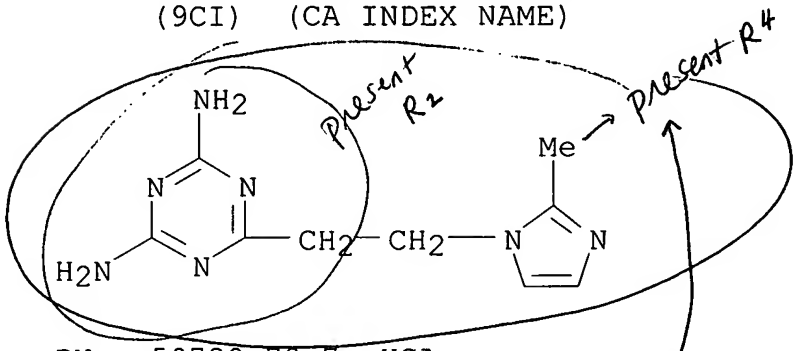
CRN 16919-18-9
CMF F6 P
CCI CCS



IT **38668-46-1 50729-78-7**
(crosslinking agents, for solder **photoresist**, for printed circuit board)

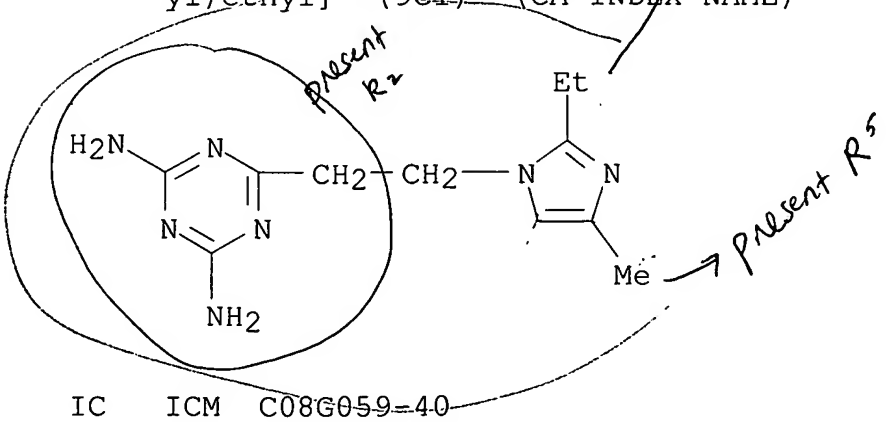
RN 38668-46-1 HCA

CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



RN 50729-78-7 HCA

CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-ethyl-4-methyl-1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)



IC ICM C08G059-40
ICS C08F299-04; C08L063-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 76

ST solder **resist** printed circuit board; polyallyl phthalate epoxy resin **photoresist**; copper coating resistance solder

resist; alk coating resistance solder **resist**; **sulfonium** salt epoxy solder **resist**

IT Polymerization catalysts
(cationic photopolymn. initiator, for epoxy resin solder **photoresist**, for printed circuit board, with resistance against alk. coating bath)

IT Crosslinking agents
(for solder **photoresist** from allyl phthalate and epoxy resin and unsatd. compd., with resistance against alk. coating bath)

IT **Resists**
(photo-, allyl phthalate and epoxy resin and unsatd. compd. for, with resistance against alk. coating bath)

IT Electric circuits
(printed, boards, solder **photoresist** for, allyl phthalate and epoxy resin and unsatd. compd. for, with resistance against alk. coating bath)

IT **74227-35-3**
(cationic photopolymn. initiator, for epoxy resin solder **photoresist**, for printed circuit board, with resistance against alk. coating bath)

IT **38668-46-1 50729-78-7**
(crosslinking agents, for solder **photoresist**, for printed circuit board)

IT 6652-28-4, Benzoin isopropyl ether 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-propanone
(radical photopolymn. initiator, for solder **photoresist**, for printed circuit board)

IT 461-58-5, Dicyandiamide 2223-82-7, Neopentylglycol diacrylate 2358-84-1, Diethylene glycol dimethacrylate 3290-92-4, Trimethylolpropane trimethacrylate 3524-68-3, Pentaerythritol triacrylate 13048-33-4, 1,6-Hexanediol diacrylate 15625-89-5, Trimethylolpropane triacrylate 25053-15-0, Daiso Dap L 25068-38-6, Epikote 828 84778-06-3, Epikote 152
(solder **photoresist** from, for printed circuit board, with resistance against alk. coating bath)

L44 ANSWER 16 OF 16 HCA COPYRIGHT 2006 ACS on STN

106:165977 Thermally depolymerizable polycarbonates. V. Acid catalyzed thermolysis of allylic and benzylic polycarbonates: a new route to **resist** imaging. Frechet, Jean M. J.; Bouchard, Francine; Eichler, Eva; Houlihan, Francis M.; Iizawa, Takashi; Kryczka, Boguslaw; Willson, C. Grant (Dep. Chem., Univ. Ottawa, Ottawa, ON, K1N 9B4, Can.). Polymer Journal (Tokyo, Japan), 19(1), 31-49 (English) **1987**. CODEN: POLJB8. ISSN: 0032-3896.

AB Polymers contg. allylic and benzylic carbonate repeating units were prepd. by phase-transfer catalyzed polycondensation of activated bis-carbonates or carbamates and diols. The polymers were highly

susceptible to thermal depolymn. and revert to small mols. when heated to temps. which vary from 140 to 230.degree. depending on structure. The thermolysis temps. were reduced to well below >100.degree. if catalytic amts. of acid are added to the polycarbonates. The thermolysis or acidolysis of bis(allylic) or benzylic carbonates provided a convenient route to arom. compds. as demonstrated with both models and polymers. The polycarbonates can be used to formulate highly sensitive **resist** materials with potential for self-development of pos. images. Some benzylic polycarbonates which produce polymerizable divinyl monomers upon thermolysis can be used to create neg. images in a process which includes both depolymn. and photocrosslinking.

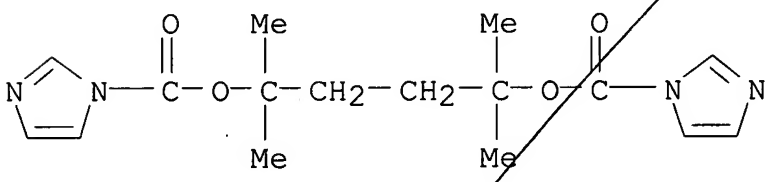
IT **99214-26-3P 107845-95-4P**
(prepn. of, **resists** from)

RN 99214-26-3 HCA

CN 1H-Imidazole-1-carboxylic acid, 1,1,4,4-tetramethyl-1,4-butanediyl ester, polymer with .alpha.,.alpha.'-dimethyl-1,4-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 98716-64-4
CMF C16 H22 N4 O4



CM 2

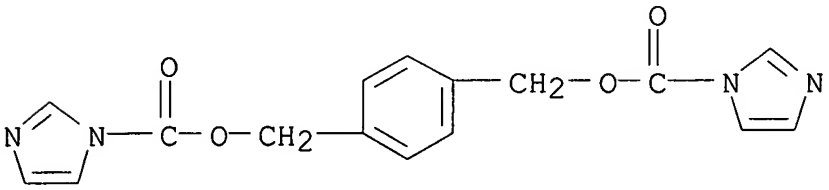
CRN 6781-43-7
CMF C10 H14 O2

RN 107845-95-4 HCA

CN 1H-Imidazole-1-carboxylic acid, 1,4-phenylenebis(methylene) ester, polymer with 2-cyclohexene-1,4-diol (9CI) (CA INDEX NAME)

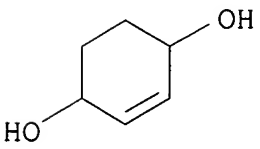
CM 1

CRN 107845-94-3
CMF C16 H14 N4 O4

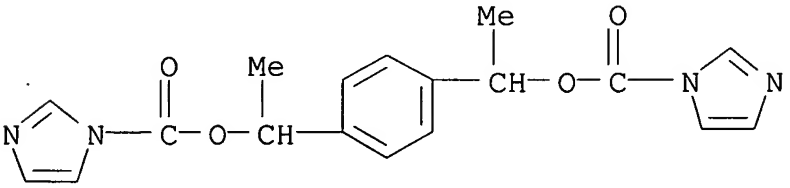


CM 2

CRN 45620-68-6
CMF C6 H10 O2



IT **102265-61-2P**
(prepn. of, synthesis of polycarbonate **resists** in relation to)
RN 102265-61-2 HCA
CN 1H-Imidazole-1-carboxylic acid, 1,4-phenylenediethylidene ester (9CI) (CA INDEX NAME)

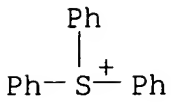


IT **57840-38-7, Triphenylsulfonium** hexafluoroantimonate
(**resist** compn. contg. thermally depolymerizable polycarbonate and)
RN 57840-38-7 HCA

CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

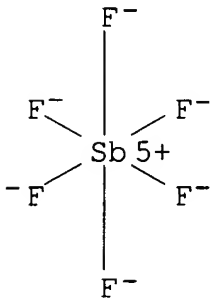
CM 1

CRN 18393-55-0
CMF C18 H15 S



CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **photoresist** thermally developable polycarbonate; thermolysis polycarbonate **resist** development

IT Polycarbonates, uses and miscellaneous
(**resist** materials from, thermally depolymerizable, prepn. of)

IT **Resists**
(photo-, allylic and benzylic polycarbonates as, thermally depolymerizable)

IT 107673-55-2P
(prepn. and polymn. of, in prepn. of polycarbonate **resist** material)

IT 107673-56-3P
(prepn. and polymn. of, in synthesis of polycarbonate **resist** material)

IT 99214-37-6P 103413-68-9P 104812-88-6P 107845-92-1P

107845-93-2P 107897-97-2P
(prepn. of, for **resist** applications)
IT **99214-26-3P** 107673-57-4P **107845-95-4P**
107845-96-5P
(prepn. of, **resists** from)
IT **102265-61-2P**
(prepn. of, synthesis of polycarbonate **resists** in relation to)
IT **57840-38-7, Triphenylsulfonium** hexafluoroantimonate
(**resist** compn. contg. thermally depolymerizable polycarbonate and)

=> d 145 1-15 cbib abs hitstr hitind

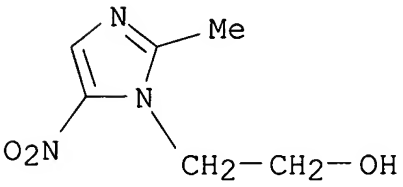
L45 ANSWER 1 OF 15 HCA COPYRIGHT 2006 ACS on STN
137:348431 Use of the photo-micronucleus assay in Chinese hamster V79 cells to study photochemical genotoxicity. Kersten, B.; Kasper, P.; Brendler-Schwaab, S. Y.; Muller, L. (Federal Institute for Drugs and Medical Devices, Bonn, D-53113, Germany). Mutation Research, 519(1-2), 49-66 (English) **2002**. CODEN: MUREAV. ISSN: 0027-5107. Publisher: Elsevier Science B.V..
AB Photochem. genotoxicity can be detected using appropriately adapted versions of most of the std. in vitro genotoxicity assays. The most sensitive approach to detect potentially photogenotoxic agents seems to be the investigation of DNA damage (DNA strand breakage, chromosomal aberrations, micronuclei) in mammalian cells in vitro. In a previous paper, we proposed the use of the micronucleus assay in Chinese hamster V79 cells for this purpose. This assay was found suitable to detect various photogenotoxic compds. with different photoactivation mechanisms. In order to extend the exptl. experiences with this assay, we present here further data from a screening mode testing of 16 different potential **photosensitizers**. The photoclastogenic and photocytotoxic potential of the compds. was investigated concomitantly. So far, all substances detected in the photo-micronucleus assay as photogenotoxins also exhibited photocytotoxic properties but not vice versa. Among the compds. tested in the present study, tiaprofenic acid, 5-MOP, angelicin, nitrazepam, bendroflumethiazide, and dacarbazine were photogenotoxic and photocytotoxic. Further, 6-mercaptopurine, a metabolite of azathioprine was pos. for both endpoints, whereas azathioprine was found neg. Azathioprine seems to be an example of a compd. which lacks photo(geno)toxic properties in vitro but may be converted to a **photosensitizer** by enzymical metabolization. With the results obtained in this study, the data base for the photo-micronucleus assay was extended to 35 compds., which were tested using the same protocol and the same

irradn. conditions. The photogenotoxicity results of all these compds. are summarized and discussed in correlation to their different photoactivation mechanisms, photocytotoxicity and photocarcinogenicity.

IT **443-48-1**, Metronidazole **446-86-6**, Azathioprine
(**photo**-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

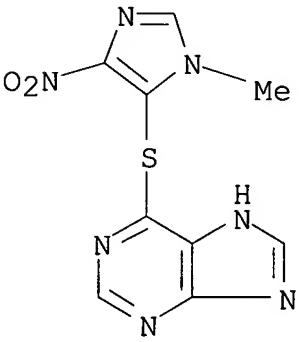
RN 443-48-1 HCA

CN 1H-Imidazole-1-ethanol, 2-methyl-5-nitro- (9CI) (CA INDEX NAME)



RN 446-86-6 HCA

CN 1H-Purine, 6-[(1-methyl-4-nitro-1H-imidazol-5-yl)thio]- (9CI) (CA INDEX NAME)



CC 8-1 (Radiation Biochemistry)
Section cross-reference(s): 1, 14

ST micronucleus assay V79 cell photochem genotoxicity **photosensitizer** screening

IT Animal cell line
(V-79; photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT Cell nucleus
(micronucleus, assay; photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT Drug screening

Genotoxicity
Mutagens
Photodynamic action
Photosensitizers, pharmaceutical
Phototoxicity
UV A radiation
UV B radiation
(photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT DNA damage
(photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT Bioassay
(photo-micronucleus; photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT Carcinogens
(photocarcinogens; photo-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

IT 50-44-2, 6-Mercaptopurine 50-53-3, biological studies 58-40-2, Promazine 60-87-7, Promethazine 61-73-4, Methylene blue 73-48-3, Bendroflumethiazide 79-57-2, Oxytetracycline 92-39-7, 2-Chlorophenothiazine 92-62-6, Proflavine 106-60-5, 5-Aminolevulinic **acid** 120-12-7, Anthracene, biological studies 123-31-9, Hydroquinone, biological studies 126-07-8, Griseofulvin 146-22-5, Nitrazepam 146-54-3, Triflupromazine 260-94-6, Acridine 298-81-7, 8-Mop 302-79-4, Retinoic **acid 443-48-1**, Metronidazole **446-86-6**, Azathioprine 484-20-8, 5-MOP 518-82-1, Emodin 523-50-2, Angelicin 548-04-9, Hypericin 553-12-8, Protoporphyrin ix 553-24-2, Neutral red 564-25-0, Doxycycline 1951-25-3, Amiodarone 4342-03-4, Dacarbazine 22071-15-4, Ketoprofen 33005-95-7, Tiaprofenic **acid** 36322-90-4, Piroxicam 98079-51-7, Lomefloxacin 119914-60-2, Grepafloxacin 144194-96-7, Bay y 3118
(**photo**-micronucleus assay use in Chinese hamster V79 cells to study photochem. genotoxicity: **photosensitizers** screening)

L45 ANSWER 2 OF 15 HCA COPYRIGHT 2006 ACS on STN
130:339438 **Photocurable** composition having low light transmission. Kamata, Hirotoshi; Koshikawa, Toshio; Sugita, Shuichi (Showa Denko K. K., Japan). Jpn. Kokai Tokkyo Koho JP 11106413 A2 **19990420** Heisei, 25 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1998-52146 19980304. PRIORITY: JP 1997-210872

19970805.

AB Title compn. comprises an ethylenic compd., a cationic dye polymn. catalyst and a quaternary boron salt **photosensitizer**. Thus, a coating 100 (from UV 6630B (polyurethane acrylate) 25.0, 1,6-hexanediol diacrylate 12.5, isobornyl acrylate 12.5, titania (CR 90) 30.0, and calcium carbonate 20.0 parts) parts was mixed with Basic Red 13 0.02 and tetra-Bu ammonium n-butyltriphenylborate 0.26 parts, showing good surface curing after irradn.

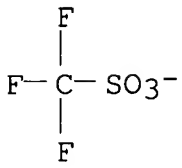
IT **66003-78-9**, Triphenylsulfonium triflate **223664-60-6** (catalyst; **photocurable** compn. with low light transmission)

RN 66003-78-9 HCA

CN Sulfonium, triphenyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

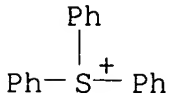
CM 1

CRN 37181-39-8
CMF C F3 O3 S



CM 2

CRN 18393-55-0
CMF C18 H15 S

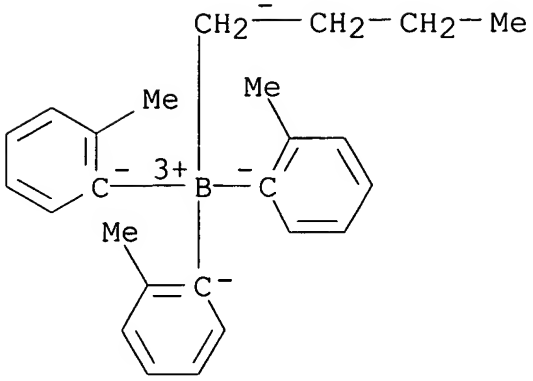


RN 223664-60-6 HCA

CN Borate(1-), butyltris(2-methylphenyl)-, (T-4)-, hydrogen, compd. with 1-ethyl-5-phenyl-1H-imidazole (1:1) (9CI) (CA INDEX NAME)

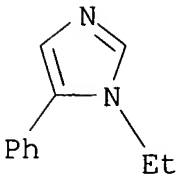
CM 1

CRN 223664-59-3
CMF C25 H30 B . H
CCI CCS



CM 2

CRN 24463-50-1
CMF C11 H12 N2



IC ICM C08F002-50
ICS C08F246-00; G03F007-028; G03F007-029; C07D209-14; C09D004-00; C09D005-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 35, 37
ST **photocurable** compn light transmission low; polyurethane hexanediol isobornyl acrylate **photocurable** compn
IT Epoxy resins, reactions
Polyurethanes, reactions
(acrylates; **photocurable** compn. with low light transmission)
IT Polymerization catalysts
(**photopolymn.**; **photocurable** compn. with low light transmission)
IT 614-45-9, tert-Butylperoxy benzoate 947-19-3, Irgacure 184 3648-36-0 6542-67-2, 2,4,6-Tris(trichloromethyl)-s-triazine 7473-98-5 17025-47-7, Tribromomethylphenylsulfone 24650-42-8,

Irgacure 651 41261-03-4 42279-63-0 47474-83-9 66003-76-7, Diphenyliodonium triflate **66003-78-9**, Triphenylsulfonium triflate 68140-79-4 71868-10-5, Irgacure 907 71873-56-8 86226-87-1 91419-04-4 119313-12-1, Irgacure 369 120307-06-4 121458-85-3 143084-46-2, N-Ethoxy-4-phenylpyridinium hexafluorophosphate 184649-96-5, Irgacure 1800 189947-80-6 189947-84-0 193146-98-4 223663-88-5 223664-11-7 223664-26-4 223664-36-6 223664-44-6 223664-51-5 **223664-60-6** 223664-85-5 223664-92-4 223664-99-1 223665-06-3 223665-23-4 223681-29-6
(catalyst; **photocurable** compn. with low light transmission)

IT 223664-04-8 223665-14-3
(**photocurable** compn. with low light transmission)

IT 224444-91-1P 224444-92-2P 224557-97-5P
(**photocurable** compn. with low light transmission)

L45 ANSWER 3 OF 15 HCA COPYRIGHT 2006 ACS on STN

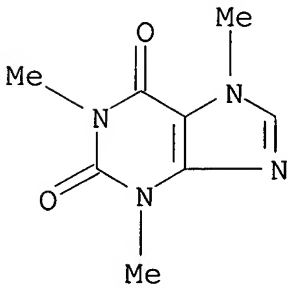
130:311647 Caffeine-water-polypeptide interaction in aqueous solution. Ghabi, Habib; Dhahbi, Mahmoud (Laboratoire de Physico-chimie des Interfaces, INRST, Hamam Lif, 2050, Tunisia). Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy, 55A(4), 919-921 (English) **1999**. CODEN: SAMCAS. ISSN: 1386-1425. Publisher: Elsevier Science B.V..

AB The interaction of caffeine monomer with the synthetic polypeptides polyasparagine (**pAg**) and polyaspartic acid (pAsp) was studied by UV spectrophotometry. The results show that different types of interactions are possible depending on the nature of polypeptide. The form of the complex was discussed.

IT **58-08-2**, Caffeine, **reactions**
(**UV** spectral study of the caffeine-polypeptide interaction in aq. soln.)

RN 58-08-2 HCA

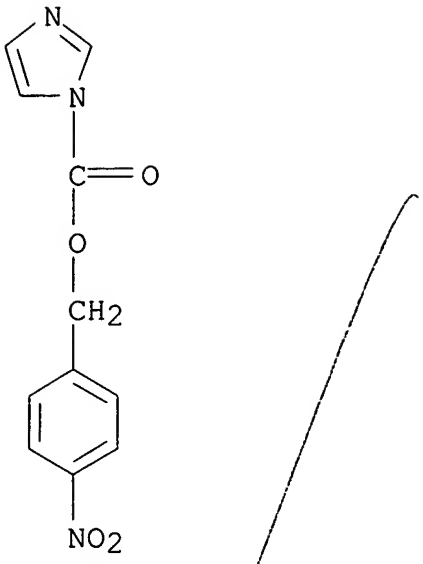
CN 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9CI) (CA INDEX NAME)



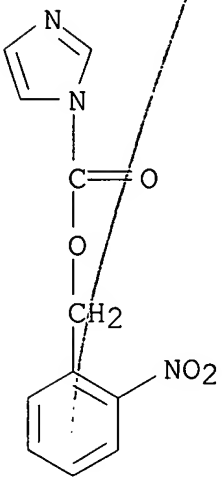
CC 26-9 (Biomolecules and Their Synthetic Analogs)

IT Peptides, **reactions**
(**UV** spectral study of the caffeine-polypeptide interaction in aq. soln.)
IT **58-08-2**, Caffeine, **reactions** 25608-40-6, Polyaspartic acid 28088-48-4, Polyasparagine
(**UV** spectral study of the caffeine-polypeptide interaction in aq. soln.)

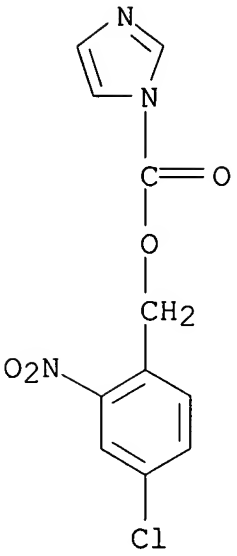
L45 ANSWER 4 OF 15 HCA COPYRIGHT 2006 ACS on STN
130:14570 A novel thermal-curing reaction of epoxy resins using **photo-generated** free amines, thiols, or imidazole from their blocked compounds. Nishikubo, Tadatomi (Kanagawa Univ., Japan). Kawamura Rikagaku Kenkyusho Hokoku 1-15 (Japanese) **1997**. CODEN: KRKHFZ. ISSN: 0917-7841. Publisher: Kawamura Rikagaku Kenkyusho.
AB The author introduced synthesis of blocked polyfunctional amines, polyfunctional thiols and imidazoles, **photo-generation** of free polyfunctional amines, thiols and imidazole from the blocked compds., and thermal curing reactions of epoxy resins using **photo-generated** these compds. This **photo**-initiating thermal **curing** system seems to be a new **UV curing** system in near future.
IT **142095-11-2P 156841-22-4P 188304-96-3P 188305-02-4P 188305-03-5P 188305-05-7P**
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
RN 142095-11-2 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



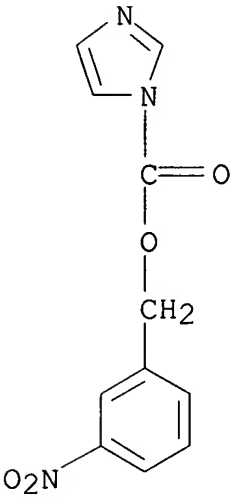
RN 156841-22-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



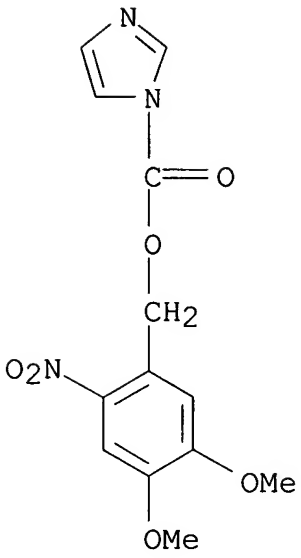
RN 188304-96-3 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-chloro-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



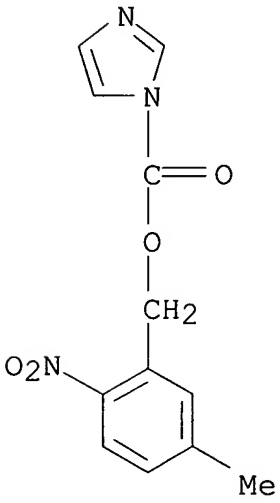
RN 188305-02-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (3-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 188305-03-5 HCA
CN 1H-Imidazole-1-carboxylic acid, (4,5-dimethoxy-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 188305-05-7 HCA
CN 1H-Imidazole-1-carboxylic acid, (5-methyl-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)

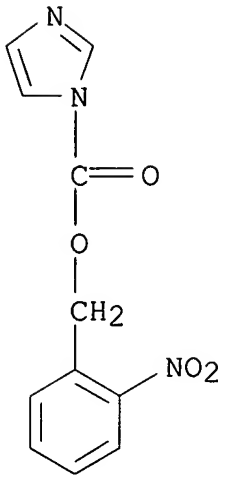


IT **216001-33-1P 216001-34-2P 216001-35-3P**
216001-36-4P 216001-37-5P 216001-38-6P
216001-39-7P 216001-40-0P 216001-41-1P
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
RN 216001-33-1 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester, polymer

with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

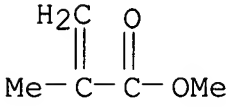
CM 1

CRN 156841-22-4
CMF C11 H9 N3 O4



CM 2

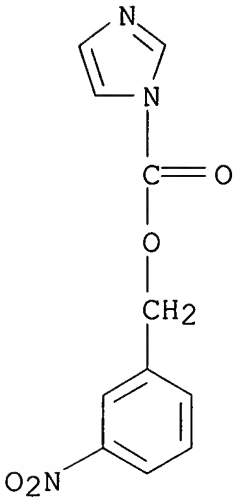
CRN 80-62-6
CMF C5 H8 O2



RN 216001-34-2 HCA
CN 1H-Imidazole-1-carboxylic acid, (3-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

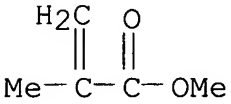
CM 1

CRN 188305-02-4
CMF C11 H9 N3 O4



CM 2

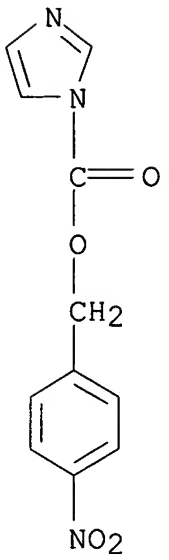
CRN 80-62-6
CMF C5 H8 O2



RN 216001-35-3 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

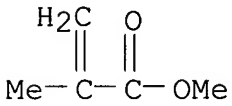
CM 1

CRN 142095-11-2
CMF C11 H9 N3 O4



CM 2

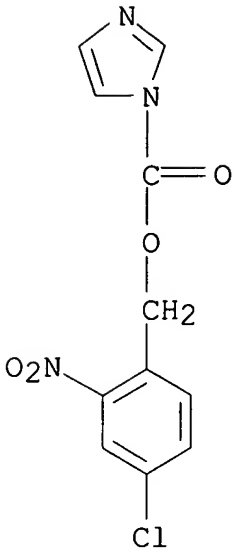
CRN 80-62-6
CMF C5 H8 O2



RN 216001-36-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-chloro-2-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

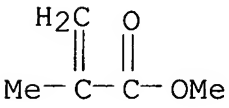
CM 1

CRN 188304-96-3
CMF C11 H8 Cl N3 O4



CM 2

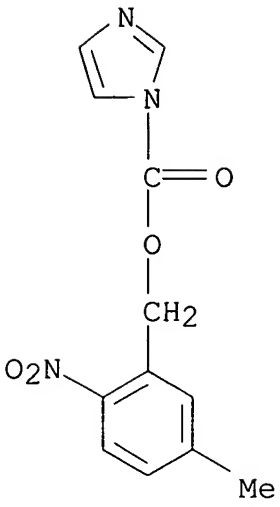
CRN 80-62-6
CMF C5 H8 O2



RN 216001-37-5 HCA
CN 1H-Imidazole-1-carboxylic acid, (5-methyl-2-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

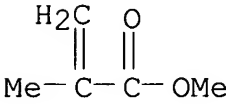
CM 1

CRN 188305-05-7
CMF C12 H11 N3 O4



CM 2

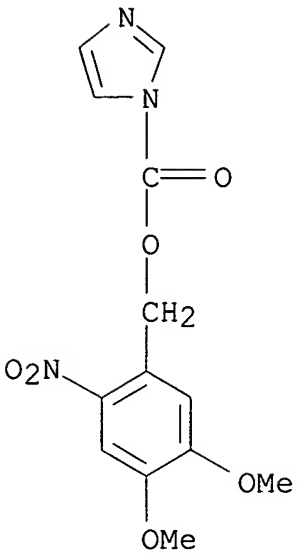
CRN 80-62-6
CMF C5 H8 O2



RN 216001-38-6 HCA
CN 1H-Imidazole-1-carboxylic acid, (4,5-dimethoxy-2-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

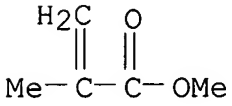
CM 1

CRN 188305-03-5
CMF C13 H13 N3 O6



CM 2

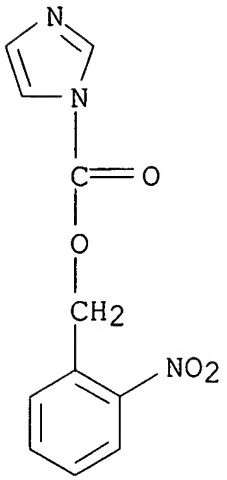
CRN 80-62-6
CMF C5 H8 O2



RN 216001-39-7 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

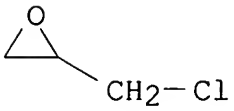
CM 1

CRN 156841-22-4
CMF C11 H9 N3 O4



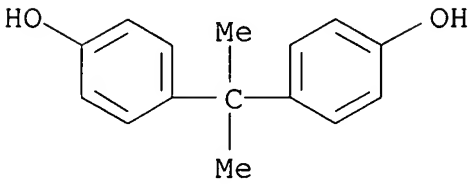
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2

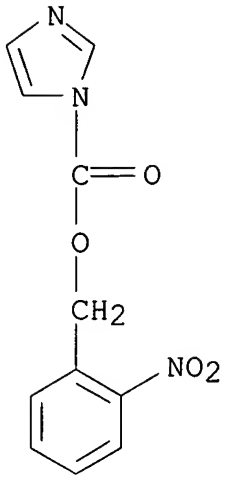


RN 216001-40-0 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester, polymer with DEN 438 (9CI) (CA INDEX NAME)

CM 1

CRN 156841-22-4

CMF C11 H9 N3 O4



CM 2

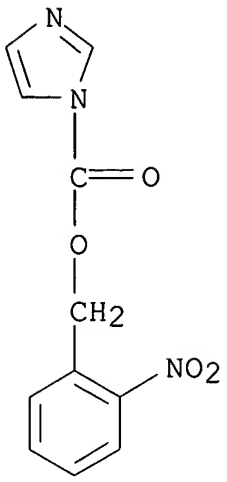
CRN 63957-64-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 216001-41-1 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester, polymer with methyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

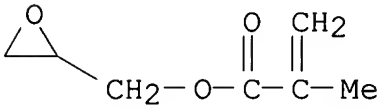
CM 1

CRN 156841-22-4
CMF C11 H9 N3 O4



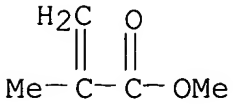
CM 2

CRN 106-91-2
CMF C7 H10 O3

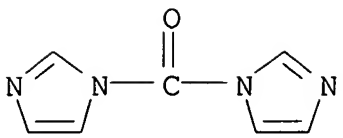


CM 3

CRN 80-62-6
CMF C5 H8 O2



IT **530-62-1**
(starting material; prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
RN 530-62-1 HCA
CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
ST epoxy resin thermal **curing photo generated** amine; thiol **photo generated** epoxy resin thermal curing; imidazole **photo generated** epoxy resin thermal curing; blocked polyfunctional amine thiol imidazole prepn epoxy resin curing
IT Crosslinking agents
Photolysis
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT Epoxy resins, preparation
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT Crosslinking
(thermal; prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT 612-25-9 822-06-0
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT 2719-05-3P 6262-23-3P 27559-51-9P 52721-83-2P 59276-03-8P 133795-15-0P **142095-11-2P 156841-22-4P** 156841-23-5P 182360-80-1P **188304-96-3P 188305-02-4P 188305-03-5P 188305-05-7P**
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT 216001-24-0P 216001-25-1P 216001-26-2P 216001-27-3P 216001-28-4P 216001-29-5P 216001-30-8P 216001-31-9P 216001-32-0P **216001-33-1P 216001-34-2P 216001-35-3P 216001-36-4P 216001-37-5P 216001-38-6P 216001-39-7P 216001-40-0P 216001-41-1P**
(prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)
IT 64-18-6, Formic acid, reactions 64-19-7, Acetic acid, reactions 65-85-0, Benzoic acid, reactions 101-77-9 105-09-9,

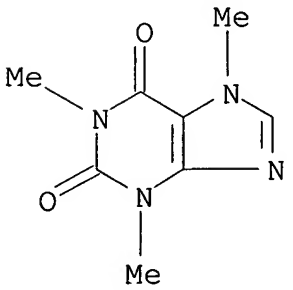
1,4-Benzenedimethanethiol **530-62-1** 584-84-9 619-25-0 619-73-8 1016-58-6 3634-83-1 14970-87-7 22996-18-5 66424-92-8
(starting material; prepn. of blocked polyfunctional amines, thiols and imidazoles for **photo-generating** of free amines, thiols, or imidazoles for thermal curing of epoxy resins)

L45 ANSWER 5 OF 15 HCA COPYRIGHT 2006 ACS on STN
129:315846 Type I **photosensitized** reactions of oxopurines. Kinetics and thermodynamics of the reaction with triplet benzophenone by time-resolved photoacoustic spectroscopy. Murgida, Daniel H.; Erra Balsells, Rosa; Crippa, Pier Raimondo; Viappiani, Cristiano (Facultad de Ciencias Exactas y Naturales, Departamento de Quimica Organica, Ciudad Universitaria, Universidad de Buenos Aires, Buenos Aires, 1428, Argent.). Chemical Physics Letters, 294(6), 538-544 (English) **1998**. CODEN: CHPLBC. ISSN: 0009-2614. Publisher: Elsevier Science B.V..

AB Ph2CO-**photosensitized** reactions of caffeine, theophylline (I) and theobromine (II) in MeCN were studied by time-resolved laser-induced photoacoustics. In the 3 cases, global quenching rate consts. of triplet Ph2CO measured as a function of temp. indicated that this is a non-activated process. Besides, for I and II, heats for N-H H abstraction reactions were detd. In agreement with semiempirical calcn. predictions, H abstraction is thermodynamically more favorable and faster for I (.DELTA.H = -265 kJ mol-1, kr = 9.6 .times. 108 M-1 s-1) than for II (.DELTA.H = -168 kJ mol-1, kr = 3.7 .times. 108 M-1 s-1).

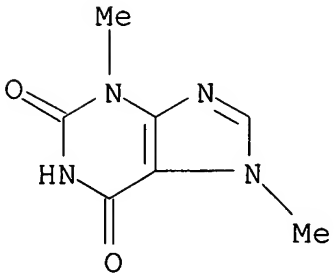
IT **58-08-2**, Caffeine, reactions **83-67-0**, Theobromine
(kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

RN 58-08-2 HCA
CN 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9CI) (CA INDEX NAME)



RN 83-67-0 HCA

CN 1H-Purine-2,6-dione, 3,7-dihydro-3,7-dimethyl- (9CI) (CA INDEX NAME)



CC 22-4 (Physical Organic Chemistry)

IT Abstraction reaction enthalpy
Abstraction reaction kinetics
(hydrogen; kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

IT AM1 MO (molecular orbital)
PM3 (molecular orbital)
(kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

IT Photoacoustic spectroscopy
(time-resolved; kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

IT **58-08-2**, Caffeine, reactions 58-55-9, Theophylline, reactions **83-67-0**, Theobromine
(kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

IT 119-61-9, Benzophenone, reactions
(triplet; kinetics and thermodn. of hydrogen abstraction from caffeine, theophylline and theobromine by **photogenerated** triplet benzophenone by time-resolved photoacoustic spectroscopy)

L45 ANSWER 6 OF 15 HCA COPYRIGHT 2006 ACS on STN

128:134229 **Photo**-induced hydrogen **generation reaction** by **polymer photo-catalyst**. Suzuki, Masahiro; Shirai, Hiroyoshi (Fac. Text. Sci., Shinshu Univ., Japan). Kobunshi Kako, 46(11), 488-494 (Japanese) **1997**. CODEN: KOKABN. ISSN: 0023-2564. Publisher: Kobunshi Kankokai.

AB Ruthenium-polyimidazole complexes are efficient enough to use as photoinduced hydrogen generation reaction **photosensitizers**

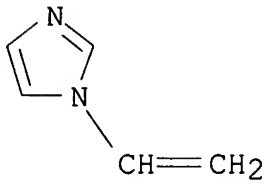
in soln. and film systems.

IT **25232-42-2D**, ruthenium complexes **182954-22-9D**, ruthenium complexes
(**photo**-induced hydrogen **generation reaction** by **polymer photo-catalyst**)

RN 25232-42-2 HCA
CN 1H-Imidazole, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

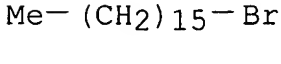
CRN 1072-63-5
CMF C5 H6 N2



RN 182954-22-9 HCA
CN 1H-Imidazole, 1-ethenyl-, homopolymer, compd. with 1-bromohexadecane (9CI) (CA INDEX NAME)

CM 1

CRN 112-82-3
CMF C16 H33 Br

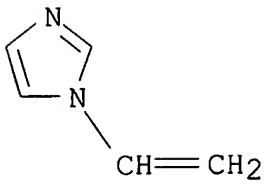


CM 2

CRN 25232-42-2
CMF (C5 H6 N2)x
CCI PMS

CM 3

CRN 1072-63-5
CMF C5 H6 N2



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 52, 67
ST photoinduced hydrogen generation ruthenium polymer **photocatalyst**
IT Photoinduced electron transfer
Photolysis
Photolysis catalysts
Photolysis kinetics
(**photo**-induced hydrogen **generation** **reaction** by **polymer photo-catalyst**)
IT **Catalysts**
(photochem.; **photo**-induced hydrogen **generation** **reaction** by **polymer photo-catalyst**)
IT 102-71-6, TEOA, uses 4685-14-7 7440-18-8D, Ruthenium, complexes with partially quaternized poly(vinylimidazole), uses 20462-61-7 22427-61-8 **25232-42-2D**, ruthenium complexes 66620-94-8 **182954-22-9D**, ruthenium complexes
(**photo**-induced hydrogen **generation** **reaction** by **polymer photo-catalyst**)
IT 1333-74-0, Hydrogen, formation (nonpreparative)
(**photo**-induced hydrogen **generation** **reaction** by **polymer photo-catalyst**)

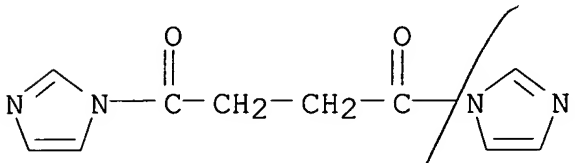
L45 ANSWER 7 OF 15 HCA COPYRIGHT 2006 ACS on STN
128:48551 Synthesis and thermal properties of crosslinked poly(2,3-tetrahydrofurandiyl)s. Nuyken, Oskar; Spindler, Christian E.; Raether, R. Benedikt (Lehrstuhl fur Makromolekulare Stoffe, Technische Universitat Munchen, Garching, 85747, Germany). Journal of Macromolecular Science, Pure and Applied Chemistry, A34(12), 2389-2404 (English) **1997**. CODEN: JSPCE6. ISSN: 1060-1325. Publisher: Marcel Dekker, Inc..
AB Bi- and trifunctional monomers with 2,3-dihydrofuranyl moieties were synthesized. The polymerizable dihydrofuranyl groups were connected to each other with ester and ether linkages. Alkyl, alkenyl and

aryl spacers were used. The synthesized monomers were copolymd. with 2,3-dihydrofuran by photoinduced cationic polymn. As **photo acid** (.mu.5-cyclopentadienyl)-Fe(II)-(.mu.6-isopropylbenzene) hexafluorophosphate was used. The thermal stability of the crosslinked poly(2,3-tetrahydrofurandiyl)s is dependent of the monomer structure. Higher stability was obsd. for poly(tetrahydrofurandiyl)s crosslinked with bis(2,3-dihydrofuranyl) compds. instead of tetraethyleneglycol bis-2-propenyl-ether.

IT **83329-71-9 115695-21-1**
(starting material; in prepn. and thermal properties of crosslinked poly(2,3-tetrahydrofurandiyl)s)

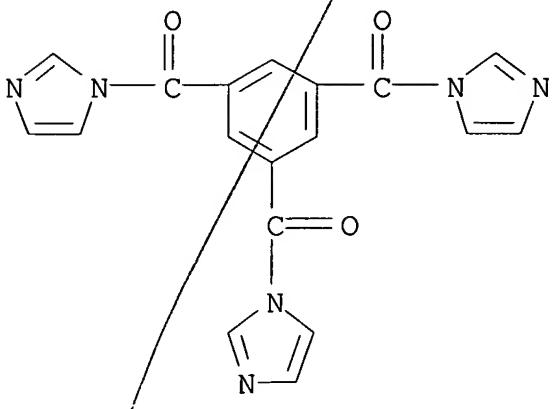
RN 83329-71-9 HCA

CN 1H-Imidazole, 1,1'-(1,4-dioxo-1,4-butanediyl)bis- (9CI) (CA INDEX NAME)



RN 115695-21-1 HCA

CN 1H-Imidazole, 1,1',1''-(1,3,5-benzenetriyltricarbonyl)tris- (9CI) (CA INDEX NAME)



CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 36

ST tetrahydrofurandiyl compd prepn **photocrosslinking** dihydrofuran; polytetrahydrofurandiyl thermal stability

IT 106-95-6, Allyl bromide, reactions 110-52-1, 1,4-Dibromobutane 488-93-7, 3-Furoic acid 543-20-4, Succinyl chloride 623-24-5, .alpha.,.alpha.'-Dibromo-p-xylene 4101-68-2, 1,10-Dibromodecane 4422-95-1, 1,3,5-Benzenetricarbonyl trichloride 6974-12-5, 1,4-Dibromobut-2-ene 18226-42-1, .alpha.,.alpha.',.alpha.''-

Tribromomesitylene **83329-71-9 115695-21-1**
(starting material; in prepn. and thermal properties of crosslinked poly(2,3-tetrahydrofurandiyl)s)

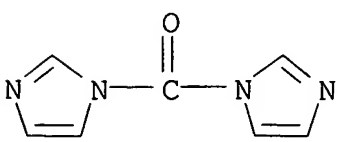
L45 ANSWER 8 OF 15 HCA COPYRIGHT 2006 ACS on STN
127:51350 Synthesis of **photoreactive** imidazole derivatives and thermal curing reaction of epoxy resins **catalyzed** by **photo-generated** imidazole. Nishikubo, Tadatomi; Kameyama, Atsushi; Toya, Yoshiyasu (Department of Applied Chemistry, Faculty of Engineering, Kanagawa University, Yokohama, 221, Japan). Polymer Journal (Tokyo), 29(5), 450-456 (English) **1997.** CODEN: POLJB8. ISSN: 0032-3896. Publisher: Society of Polymer Science, Japan.

AB **Photoreactive** blocked imidazoles such as N-(2-nitrobenzyloxycarbonyl)imidazole (2-NBCI), N-(3-nitrobenzyloxycarbonyl)imidazole (3-NBCI), N-(4-nitrobenzyloxycarbonyl)imidazole (4-NBCI), N-(4-chloro-2-nitrobenzyloxy-carbonyl)imidazole (CNBCI), N-(5-methyl-2-nitrobenzyloxycarbonyl)imidazole (MNBCI), and N-(4,5-dimethoxy-2-nitrobenzyloxycarbonyl)imidazole (DNBCI) were synthesized in good yields by the reaction of N,N'-carbonyldiimidazole (CDI) with the corresponding benzyl alcs. The prepd. 2-NBCI decompd. smoothly to produce imidazole by UV-irradn. in THF soln. or poly(Me methacrylate) (PMMA) film. Rates of photolysis of DNBCI, MNBCI and CNBCI were higher than that of 2-NBCI in PMMA film, although the rates of 3-NBCI and 4-NBCI were slower than that of 2-NBCI in PMMA film under the same conditions. Thermal curing reactions of epoxy resins and poly(glycidyl methacrylate-co-Me methacrylate) [P(GMA55-MMA45)] using **photo-generated** imidazole were examd. at 100-160.degree.. The ring opening reaction of epoxide groups, confirmed by IR spectra, in epoxy resins and P(GMA55-MMA45) proceeded smoothly by **catalysis** of the **photo-generated** imidazole.

IT **530-62-1**, N,N'-Carbonyldiimidazole
(reactant, with benzyl alc. derivs.; in synthesis of **photoreactive** imidazole derivs. for thermal curing of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer by **photo-generated** imidazole **catalyst**
)

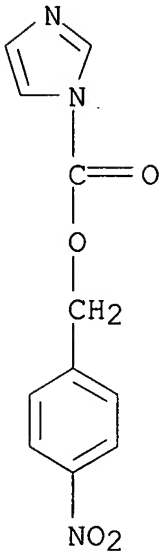
RN 530-62-1 HCA

CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)

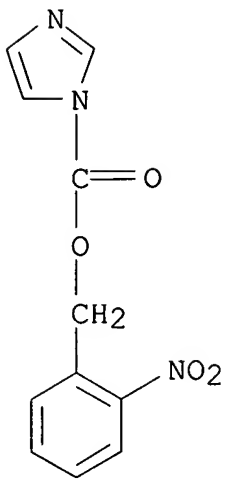


IT **142095-11-2P**, N-(4-Nitrobenzyloxycarbonyl)imidazole
156841-22-4P, N-(2-Nitrobenzyloxycarbonyl)imidazole
188304-96-3P, N-(4-Chloro-2-nitrobenzyloxy-carbonyl)imidazole **188305-02-4P**, N-(3-Nitrobenzyloxycarbonyl)imidazole **188305-03-5P**, N-(4,5-Dimethoxy-2-nitrobenzyloxycarbonyl)imidazole
188305-05-7P, N-(5-Methyl-2-nitrobenzyloxycarbonyl)imidazole
(synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)

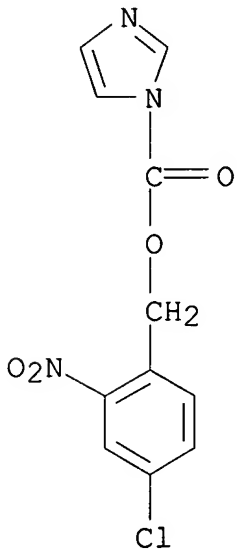
RN 142095-11-2 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



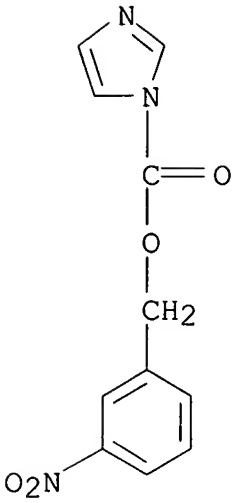
RN 156841-22-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



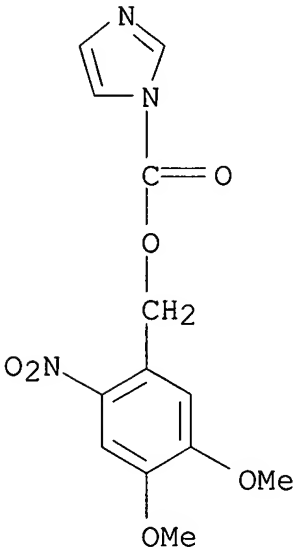
RN 188304-96-3 HCA
CN 1H-Imidazole-1-carboxylic acid, (4-chloro-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



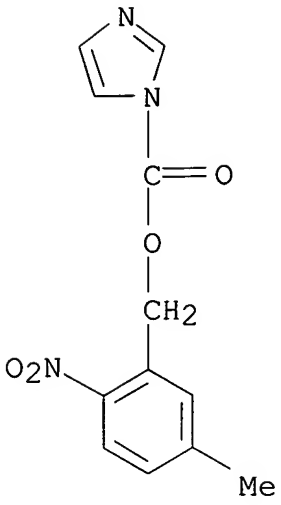
RN 188305-02-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (3-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 188305-03-5 HCA
CN 1H-Imidazole-1-carboxylic acid, (4,5-dimethoxy-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



RN 188305-05-7 HCA
CN 1H-Imidazole-1-carboxylic acid, (5-methyl-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



CC 37-2 (Plastics Manufacture and Processing)
ST **photoreactive** imidazole deriv prepn; crosslinking epoxy resin polymethacrylate
IT Epoxy resins, processes
(phenolic, novolak; synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)
IT Crosslinking catalysts
Photolysis
(synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)
IT Epoxy resins, processes
(synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)
IT **530-62-1**, N,N'-Carbonyldiimidazole
(reactant, with benzyl alc. derivs.; in synthesis of **photoreactive** imidazole derivs. for thermal curing of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer by **photo-generated** imidazole **catalyst**
)
IT 612-25-9, 2-Nitrobenzyl alcohol 619-25-0, 3-Nitrobenzyl alcohol
619-73-8, 4-Nitrobenzyl alcohol 1016-58-6, 4,5-Dimethoxy-2-

nitrobenzyl alcohol 22996-18-5, 4-Chloro-2-nitrobenzyl alcohol 66424-92-8, 5-Methyl-2-nitrobenzyl alcohol
(reactant, with carbonyldiimidazole; in synthesis of **photoreactive** imidazole derivs. for thermal curing of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer by **photo-generated** imidazole **catalyst**
)

IT 25068-38-6 26141-88-8, Glycidyl methacrylate-methyl methacrylate copolymer 63957-64-2, DEN 438
(synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)

IT **142095-11-2P**, N-(4-Nitrobenzyloxycarbonyl)imidazole **156841-22-4P**, N-(2-Nitrobenzyloxycarbonyl)imidazole **188304-96-3P**, N-(4-Chloro-2-nitrobenzyloxy-carbonyl)imidazole **188305-02-4P**, N-(3-Nitrobenzyloxycarbonyl)imidazole **188305-03-5P**, N-(4,5-Dimethoxy-2-nitrobenzyloxycarbonyl)imidazole **188305-05-7P**, N-(5-Methyl-2-nitrobenzyloxycarbonyl)imidazole
(synthesis of **photoreactive** imidazole derivs., **photogeneration** of free imidazole, and thermal curing reaction of epoxy resins and glycidyl methacrylate-Me methacrylate copolymer **catalyzed** by **photo-generated** imidazole)

L45 ANSWER 9 OF 15 HCA COPYRIGHT 2006 ACS on STN

125:249390 Novel thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photo-generated** difunctional thiols. Nishikubo, Tadatomi; Kameyama, Atsushi; Kashiwagi, Koutaro; Oyama, Naoto (Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan). Polymer Journal (Tokyo), 28(9), 795-800 (English) **1996**. CODEN: POLJB8. ISSN: 0032-3896. Publisher: Society of Polymer Science, Japan.

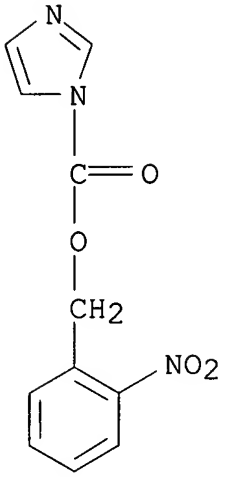
AB Blocked dithiols such as p-xylenebis(2-nitrobenzyl-.alpha.-S-thiocarbonate) (XBBTC) and bis[(2-nitrobenzyloxycarbonyl)thioethyl]ether (EBTE) were synthesized by reactions of 1,4-bis(mercaptomethyl)benzene (BMMB) and ethylene glycol bis(mercaptoethyl)ether (EBME) with N-(2-nitrobenzyloxycarbonyl)imidazole. The prepd. XBBTC and EBTE decompd. very smoothly to the corresponding dithiol such as BMMB and EBME by irradn. with UV-light in THF soln., epoxy resins, or polymer film. Thermal curing reaction of epoxy resins and poly(glycidyl methacrylate-co-Me methacrylate) (PGMA) using **photo-generated** dithiols were also examd., and it was found that novolak-type epoxy resin and PGMA gave gel products by heating with **photo-generated** dithiol compds., although

bisphenol type epoxy resin did not produce gel products by treatment under the same conditions. The ring opening reaction of the epoxide group in the mixt. of epoxy compds. with blocked dithiols was confirmed by IR spectra.

IT **156841-22-4**, N-(2-Nitrobenzyloxycarbonyl)imidazole
(starting materials for thiol prepn.; thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

RN 156841-22-4 HCA

CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 35

IT **Photolysis**
(thermal **curing reactions** of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

IT Epoxy resins, processes
(thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

IT Crosslinking
(thermal, of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

IT **156841-22-4**, N-(2-Nitrobenzyloxycarbonyl)imidazole
(starting materials for thiol prepn.; thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

IT 156841-23-5P, p-Xylenebis(2-nitrobenzyl-.alpha.-S-thiocarbonate)
182360-80-1P
(thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

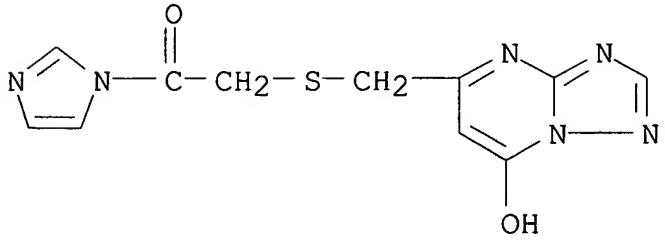
IT 25068-38-6 26141-88-8, Glycidyl methacrylatemethyl methacrylate copolymer 63957-64-2, DEN 438
(thermal curing reactions of epoxy resin and poly(glycidyl methacrylate) using **photogenerated** difunctional thiols)

L45 ANSWER 10 OF 15 HCA COPYRIGHT 2006 ACS on STN
123:97723 Method for making direct-positive photographic images.. Dewanckele, Jean-Marie; Terrell, David; Viaene, Kris (AGFA-GEVAERT Naamloze vennootschap, Belg.). Eur. Pat. Appl. EP 634691 A1 **19950118**, 21 pp. DESIGNATED STATES: R: BE, DE, FR, GB, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1993-202051 19930712.

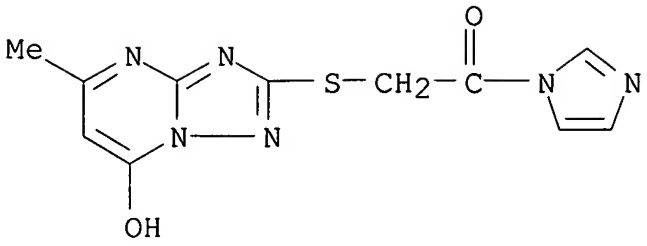
AB A method for making direct-pos. images comprises: image-wise exposing a photog. **light-sensitive** Ag halide material comprising a support and a layer of an internal latent image-type Ag halide emulsion, the **pAg** of which was adjusted to 9.0-10.5 before coating, and developing the exposed photog. Ag halide material in a surface developer in the presence of a development nucleator with a group promoting adsorption to Ag halide. A development-nucleating amt. of a hydrazine compd. with a 7-hydroxy-s-triazolo-[1,5-a]-pyrimidine group as group promoting adsorption to Ag halide is very useful. The development nucleators do not cause loss of sensitivity during exposure or unevenness of development and the images have a high max. d. and high exposure latitude.

IT **165320-40-1P 165320-41-2P**
(photog. development nucleator)

RN 165320-40-1 HCA
CN 1H-Imidazole, 1-[[[(7-hydroxy[1,2,4]triazolo[1,5-a]pyrimidin-5-yl)methyl]thio]acetyl]- (9CI) (CA INDEX NAME)

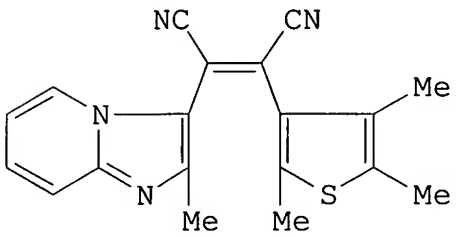


RN 165320-41-2 HCA
CN 1H-Imidazole, 1-[[(7-hydroxy-5-methyl[1,2,4]triazolo[1,5-a]pyrimidin-2-yl)thio]acetyl]- (9CI) (CA INDEX NAME)

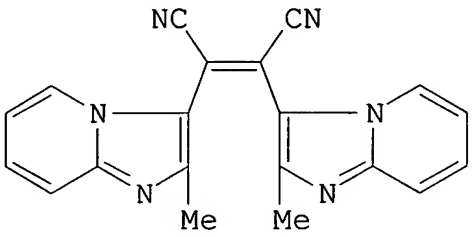


IC ICM G03C001-485
ICS C07D487-04
ICI C07D487-04, C07D249-00, C07D239-00
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **165320-40-1P 165320-41-2P**
(photog. development nucleator)

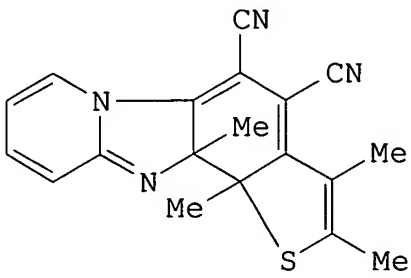
L45 ANSWER 11 OF 15 HCA COPYRIGHT 2006 ACS on STN
114:184590 Thermally irreversible photochromic systems. **Photoreaction** of diarylethene derivatives with imidazo[1,2-a]pyridine rings. Nakayama, Yasuhide; Hayashi, Koichiro; Irie, Masahiro (Inst. Sci. Ind. Res. Osaka Univ., Ibaraki, 567, Japan). Bulletin of the Chemical Society of Japan, 64(1), 202-7 (English) **1991**. CODEN: BCSJA8. ISSN: 0009-2673.
GI



I



II



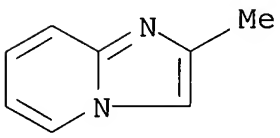
III

AB A nonsym. diarylethene with imidazo[1,2-a]pyridine ring on one end and thiophene ring on the other end, (Z)-I, underwent a hexatriene-cyclohexadiene type reversible ring-closure reaction of photoirradn., while only Z-E isomerization was obsd. for a sym. diarylethene with 2 imidazo[1,2-a]pyridine rings, (Z)-II. The ring-closure reaction was not discerned. The **photogenerated** closed-ring form III had the absorption band at 535 nm, which is 23 nm longer wavelengths than that of the corresponding dithienylethene, and kept the absorption intensity const. for more than 24 h at 80.degree.. The quantum yield close to unity was obsd. for the photochem. ring-opening reaction of III with 546 nm light.

IT **934-37-2P**
(prepn. and aminomethylation of)

RN 934-37-2 HCA

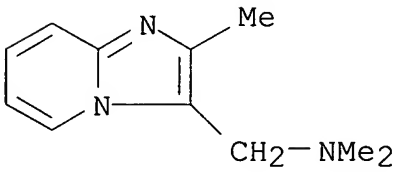
CN Imidazo[1,2-a]pyridine, 2-methyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **133395-11-6P**
(prepn. and conversion of, to Me iodide salts)

RN 133395-11-6 HCA

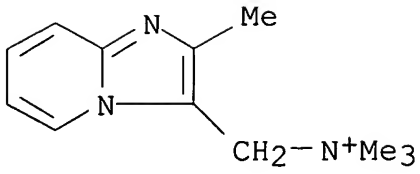
CN Imidazo[1,2-a]pyridine-3-methanamine, N,N,2-trimethyl- (9CI) (CA INDEX NAME)



IT **6188-35-8P**
(prepn. and conversion of, to cyanomethyl deriv.)

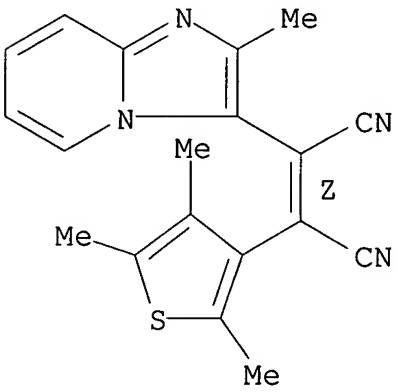
RN 6188-35-8 HCA

CN Imidazo[1,2-a]pyridine-3-methanaminium, N,N,N,2-tetramethyl-, iodide (9CI) (CA INDEX NAME)



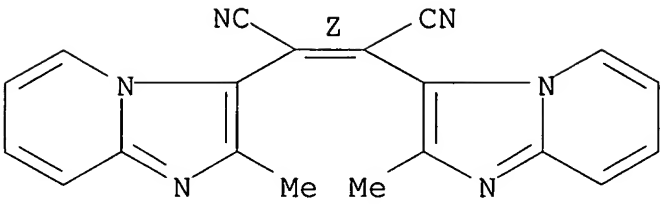
IT **133395-13-8P**
(prepn. and photochem. ring-closure reaction of)
RN 133395-13-8 HCA
CN 2-Butenedinitrile, 2-(2-methylimidazo[1,2-a]pyridin-3-yl)-3-(2,4,5-trimethyl-3-thienyl)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



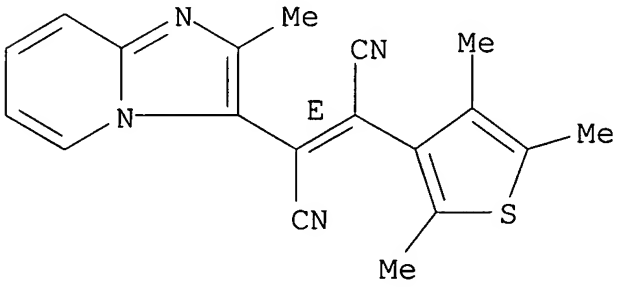
IT **133395-12-7P 133395-14-9P 133412-48-3P**
(prepn. and photoisomerization of)
RN 133395-12-7 HCA
CN 2-Butenedinitrile, 2,3-bis(2-methylimidazo[1,2-a]pyridin-3-yl)-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



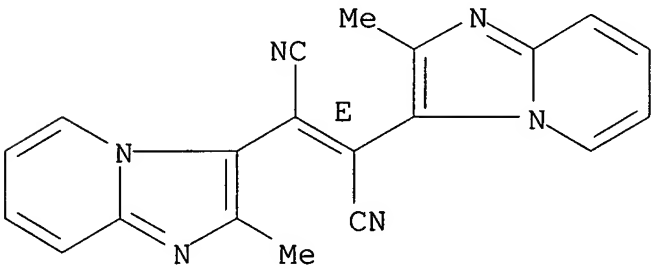
RN 133395-14-9 HCA
CN 2-Butenedinitrile, 2-(2-methylimidazo[1,2-a]pyridin-3-yl)-3-(2,4,5-trimethyl-3-thienyl)-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

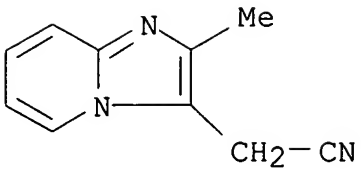


RN 133412-48-3 HCA
CN 2-Butenedinitrile, 2,3-bis(2-methylimidazo[1,2-a]pyridin-3-yl)-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



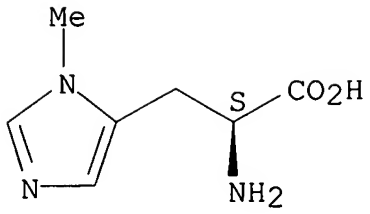
IT **21797-94-4P**
(prepn. and self- and cross-coupling reactions of)
RN 21797-94-4 HCA
CN Imidazo[1,2-a]pyridine-3-acetonitrile, 2-methyl- (8CI, 9CI) (CA INDEX NAME)



CC 22-5 (Physical Organic Chemistry)
IT **934-37-2P**
(prepn. and aminomethylation of)
IT **133395-11-6P**
(prepn. and conversion of, to Me iodide salts)
IT **6188-35-8P**
(prepn. and conversion of, to cyanomethyl deriv.)
IT **133395-13-8P**
(prepn. and photochem. ring-closure reaction of)
IT **133395-12-7P 133395-14-9P 133412-48-3P**
(prepn. and photoisomerization of)
IT **21797-94-4P**
(prepn. and self- and cross-coupling reactions of)

L45 ANSWER 12 OF 15 HCA COPYRIGHT 2006 ACS on STN
112:119376 Photo-CIDNP of the amino acids. Stob, S.; Kaptein, R. (Dep. Phys. Chem., Univ. Groningen, Groningen, 9747, Neth.). Photochemistry and Photobiology, 49(5), 565-77 (English) **1989**. CODEN: PHCBAP. ISSN: 0031-8655.
AB A photochem. induced dynamic nuclear polarization (photo-CIDNP) study is presented of the amino acids that are polarizable with a flavin dye. These include derivs. of tryptophan, tyrosine, histidine, methylated lysines and methionine. The influence of pH, concn., and chem. modification on the magnitude of the CIDNP effect has been studied to obtain mechanistic information about the radical pair formation. The pH and concn. dependence of tyrosine and tryptophan polarization could be accounted for quant. The CIDNP evidence indicates that hydrogen-atom abstraction is important in generating radical pairs in the case of histidine and tyrosine, while electron transfer prevails in the case of tryptophan, the methylated lysines, and methionine.
IT **368-16-1**
(photo-CIDNP of)
RN 368-16-1 HCA
CN L-Histidine, 3-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 34-2 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 22

ST **photo** CIDNP amino **acid** electron transfer; hydrogen transfer **photo** CIDNP amino **acid**

IT Amino **acids**, properties
(**photo**-CIDNP of, electron and hydrogen atom transfer in)

IT 1088-56-8, Lumiflavine
(calcd. free energy of, for **photoreaction** with amino acids)

IT 60-18-4, Tyrosine, properties 71-00-1, Histidine, properties
(calcd. free energy of, for **photoreaction** with lumiflavine)

IT **368-16-1** 608-07-1, 5-Methoxytryptamine 1188-07-4, N.epsilon.-Methyllysine 1218-34-4 2259-86-1, N.epsilon.-N.epsilon.-Dimethyllysine 2497-02-1 3387-86-8 3604-79-3, 3-Nitrotyrosine 21339-55-9 120-72-9P, 1H-Indole, preparation
(photo-CIDNP of)

IT 73-22-3, Tryptophan, properties
(photo-CIDNP of and calcd. free energy of, for **photoreaction** with lumiflavine)

L45 ANSWER 13 OF 15 HCA COPYRIGHT 2006 ACS on STN

105:98285 Photoregulated sorption of dyes to polymers. II. Adsorption of Acid Yellow 38 to hydrophilic **polymers** and its **light**-induced desorption. Petrak, K.; Leyshon, L.; Douglas, P. (Res. Div., Kodak Ltd., Harrow/Middlesex, UK). Journal of Applied Polymer Science, 31(4), 1093-100 (English) **1986**. CODEN: JAPNAB. ISSN: 0021-8995.

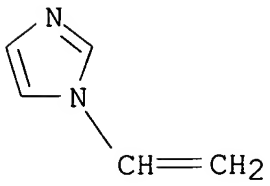
AB Adsorption of Acid Yellow [2706-28-7] to, and its light-induced desorption from, various aq. polymer layers were studied. Diffusion studies were used to det. the degree of competitive binding between the dye and polymers. The extent of both adsorption and desorption were different for polymer mixts. as compared to single polymer films. The presence of gelatin crosslinked within the polymer layer increased the amt. of dye desorbed upon irradn.

IT **25232-42-2 72688-43-8 81517-54-6**
(acid dye adsorption on and photodesorption from)

RN 25232-42-2 HCA
CN 1H-Imidazole, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

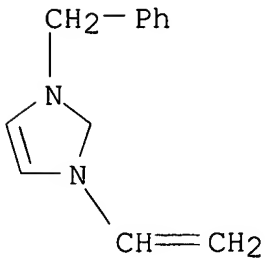
CRN 1072-63-5
CMF C5 H6 N2



RN 72688-43-8 HCA
CN 1H-Imidazolium, 1-ethenyl-3-(phenylmethyl)-, chloride, polymer with ethenylbenzene and 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

CM 1

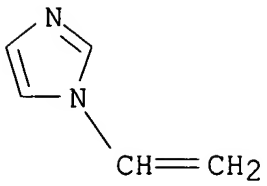
CRN 70333-42-5
CMF C12 H13 N2 . Cl



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 1072-63-5
CMF C5 H6 N2



CM 3

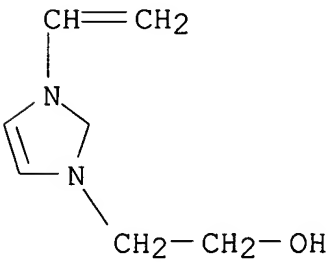
CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

RN 81517-54-6 HCA
CN 1H-Imidazolium, 1-ethenyl-3-(2-hydroxyethyl)-, chloride, polymer with 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

CM 1

CRN 50295-62-0
CMF C7 H11 N2 O . Cl

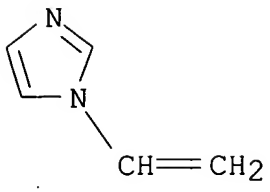


● Cl^-

ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 1072-63-5
CMF C5 H6 N2



CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 37

IT Desorption
(**photo-**, of **acid** dye from hydrophilic polymers)

IT 9003-39-8 25014-15-7 25232-41-1 **25232-42-2** **72688-43-8 81517-54-6**
(acid dye adsorption on and photodesorption from)

L45 ANSWER 14 OF 15 HCA COPYRIGHT 2006 ACS on STN
94:165674 Electrically activated recording material for use in dry recording of images. Lelental, Mark (Eastman Kodak Co., USA). Ger. Offen. DE 3025839 **19810129**, 61 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1980-3025839 19800708.

AB For dye-intensified Ag images, generated in ambient light and developed by heating at 100-180.degree., an elec. activated recording layer is used, having a resistivity of 104-1012 .OMEGA.-cm, a **pAg** of 2.5-7.5, and a pH of 2.0-6.0. This layer contains in an acrylamide-vinylbenzimidazole copolymer as elec. conductive binder a primary amine as reductant 1-5 mol with a Ag salt or complex of a C10-30 fatty acid or of a 1,2,4-mercaptotriazole as oxidant 3-12 mol, and a coupler forming a dye with the Ag-oxidized amine, esp. a 2,6-dihydroxyacetanilide, 1-5 mol. This elec. activated layer is backed by an elec. conductive support with a conductive sublayer and sepd. by a <20 .mu. air space face-to-face from a photoconductor layer, also on a conductive support. During the exposure, which may involve x-rays (with PbO as photoconductor), an electrostatically charged stencil, or a scanning electron beam, and which generates a photocond. pattern in the photoconductor and a thermally developable latent image in the recording layer, a potential of 10-3-10-9 C/cm2 is applied in the exposed areas. The latent image is assumed to consist of centers which catalyze the oxidant-reductant reaction. A no. of possibilities are discussed, such as the addn. of a **photosensitive** Ag halide, colloidal SiO2, a base precursor, or a fluxing agent (AcNH2). Thus, a polyester support coated with a Me acrylate-CH2CCl2-itaconic acid terpolymer adhesive, a Cermet conductive layer, and a 127 .mu. (wet: 90-100 mg, Ag/929 cm2) recording coating contg. in the same terpolymer binder Ag 3-amino-5-benzylthio-1,2,4-triazole, 4-aminomethoxy-N,N,5-

trimethylaniline sulfate (reductant), 2',6'-dihydroxytrifluoroacetanilide (coupler), methylmercaptotriazole (antifoggant), 4-phenyl-3-imino-5-thiourazole (development accelerator), and Olin Surfactant 10G. Sepd. by a 20 .mu. air space was a 17 .mu. coating of an org. photoconductor backed by a polyester support with conductive CuI. By a charge of +4 kV, an exposure of 100 microcoulomb/cm2, and heating at 160.degree. for 10 s, a Ag-dye image with a transmission d. of 1.0 was generated.

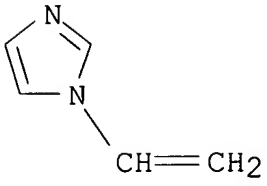
IT **35429-23-3**
(elec. activated recording material contg., for dye-intensifying silver image)

RN 35429-23-3 HCA

CN 2-Propenamide, polymer with 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

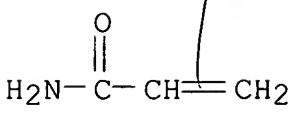
CM 1

CRN 1072-63-5
CMF C5 H6 N2



CM 2

CRN 79-06-1
CMF C3 H5 N O



IC G03G005-00; G03G013-00; G03C005-00

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 1335-25-7 5373-68-2 7411-18-9 25249-60-9 **35429-23-3** 51569-39-2 63573-59-1 67021-87-8 73151-64-1
(elec. activated recording material contg., for dye-intensifying silver image)

L45 ANSWER 15 OF 15 HCA COPYRIGHT 2006 ACS on STN

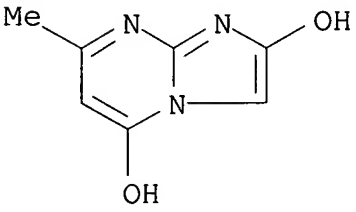
81:19229 Photographic silver halide emulsion. Durning, Maurice F.; Starr, John E. (Eastman Kodak Co.). Ger. Offen. DE 2349504 **19740411**, 25 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1973-2349504 19731002.

AB Photog. emulsions, having a **pAg** of 6.5-7.5, are sensitized to wavelengths >700 nm by 100-800 mg/mole Ag of suitable cyanine, mero-, hemicyanine, oxonol or styryl dyes, having a polarog. halfwave potential of -0.2 to -1.2 V. To minimize loss of inherent blue speed Ag complex-forming tri-, tetra- or pentaazaindenes are added as stabilizers at 40-60.degree.. Thus, the relative ir speed of a photog. emulsion of **pAg** 8.7 contg. 3,3'-diethylselenadicarbocyanine iodide was 100 as compared to 740 with the addn. of 1.8 g/mole Ag of 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene.

IT **52893-02-4**
(photographic stabilizer, for cyanine dye-**photosensitized** silver halide ir-sensitive emulsions)

RN 52893-02-4 HCA

CN Imidazo[1,2-a]pyrimidine-2,5-diol, 7-methyl- (6CI, 9CI) (CA INDEX NAME)



IC G03C

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT Photographic stabilizers
(tri- and tetraazaindene derivs. as, for cyanine dye-**photosensitized** silver halide ir-sensitive emulsions)

IT 2503-56-2 52892-99-6 52893-00-2 52893-01-3 **52893-02-4**
(photographic stabilizer, for cyanine dye-**photosensitized** silver halide ir-sensitive emulsions)

=> d l46 1-16 ti

L46 ANSWER 1 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Individually addressable parallel peptide synthesis on microchips

L46 ANSWER 2 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Nucleic acid markers useful for the identification, assessment, prevention and therapy of human cancers

L46 ANSWER 3 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Evidence that long-lasting potentiation of amygdala efferents in the right hemisphere underlies pharmacological stressor (FG-7142) induced lasting increases in anxiety-like behaviour: role of GABA tone in initiation of brain and behavioural changes

L46 ANSWER 4 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Surface Functionalization of Cadmium Sulfide Quantum-Confined Nanoclusters. 5. Evidence of Facile Surface-Core Electronic Communication in the Photodecomposition Mechanism of Functionalized Quantum Dots

L46 ANSWER 5 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Evidence that NMDA-dependent limbic neural plasticity in the right hemisphere mediates pharmacological stressor (FG-7142)-induced lasting increases in anxiety-like behavior. Study 3-the effects on amygdala efferent physiology of block of NMDA receptors prior to injection of FG-7142 and its relationship to behavioral change

L46 ANSWER 6 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI The effect of structural variations on the properties of polycarbonates susceptible to thermolytic or acidolytic degradation

L46 ANSWER 7 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Reversible modification of sulfur-containing molecules with polyalkylene glycol derivatives and their use.

L46 ANSWER 8 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI **Photo-generation** of polyfunctional thiol and thermal curing reaction of epoxy resins using the thiol

L46 ANSWER 9 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI A qualitative fluorescence-based assay for tyrosyl radical scavenging activity: ovothiol A is an efficient scavenger

L46 ANSWER 10 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Interaction of triplet state nucleic acid bases with electroaffinic molecules in solution by laser flash photolysis

L46 ANSWER 11 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Antinociceptive effects of thyrotropin-releasing hormone and its analogs in the rat periaqueductal gray region

L46 ANSWER 12 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI **Photogeneration** of superoxide anion upon illumination of purines and pyrimidines in the presence of riboflavin: structure-activity relationships

L46 ANSWER 13 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI High-speed photographic silver halide emulsions

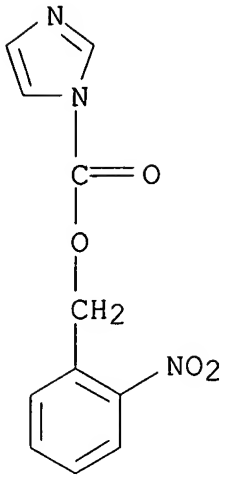
L46 ANSWER 14 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Surface sensitive silver halide emulsion containing a silver complexing azaindene to reduce desensitization of optical sensitizing dye incorporated therein

L46 ANSWER 15 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Effect of alloxan-related compounds on the photooxidation of cystine and insulin induced by methylene blue

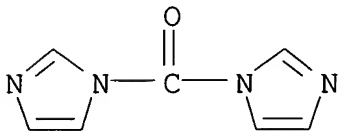
L46 ANSWER 16 OF 16 HCA COPYRIGHT 2006 ACS on STN
TI Dye-sensitized photoxidation of purine and pyrimidine derivatives

=> d l46 8,13,14 cbib abs hitstr hitind

L46 ANSWER 8 OF 16 HCA COPYRIGHT 2006 ACS on STN
121:110443 **Photo-generation** of polyfunctional thiol and thermal curing reaction of epoxy resins using the thiol. Nishikubo, Tadatomi; Kameyama, Atsushi; Kashiwagi, Koutaro (Fac. Eng., Kanagawa Univ., Yokohama, 221, Japan). Polymer Journal (Tokyo, Japan), 26(7), 864-7 (English) **1994**. CODEN: POLJB8. ISSN: 0032-3896.
AB Latent crosslinking agent, p-xylenebis(2-nitrobenzyl-.alpha.-S-thiocarbonate) (I), was synthesized reacting 1,4-bis(mercaptomethyl)benzene (II) with N-(2-Nitrobenzyloxycarbonyl)imidazole. UV photolysis of I generated II that thermally crosslinked bisphenol A epoxy resin (Epikote 828) or novolac epoxy resin at 120.degree..
IT **156841-22-4P**, N-(2-Nitrobenzyloxycarbonyl)imidazole
(prepn. and reaction of, with bis(mercaptomethyl)benzene)
RN 156841-22-4 HCA
CN 1H-Imidazole-1-carboxylic acid, (2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



IT **530-62-1**, N,N'-Carbonyldiimidazole
(reaction of, with nitrobenzyl alc.)
RN 530-62-1 HCA
CN 1H-Imidazole, 1,1'-carbonylbis- (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
ST bismercaptomethylbenzene **photogeneration** epoxy thermal crosslinking; thiol crosslinking agent **photogeneration** epoxy
IT Epoxy resins, reactions
(crosslinking of, by in situ **photogenerated** bis(mercaptomethyl)benzene)
IT 156841-23-5P
(prepn. and bis(mercaptomethyl)benzene **photogeneration** from, as crosslinking agent for epoxy resins)
IT **156841-22-4P**, N-(2-Nitrobenzyloxycarbonyl)imidazole
(prepn. and reaction of, with bis(mercaptomethyl)benzene)
IT **530-62-1**, N,N'-Carbonyldiimidazole
(reaction of, with nitrobenzyl alc.)

L46 ANSWER 13 OF 16 HCA COPYRIGHT 2006 ACS on STN
91:132099 High-speed photographic silver halide emulsions. Becker, Manfred; Slabik, Angela; Muecke, Bruno; Moisar, Erik; Von Rintelen, Harald (Agfa-Gevaert A.-G., Fed. Rep. Ger.). Ger. Offen. DE 2758711 **19790719**, 28 pp. (German). CODEN: GWXXBX. APPLICATION: DE

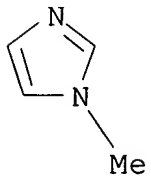
1977-2758711 19771229.

AB The grain size of Ag halides for neg. or pos. emulsions of various types is increased if a water-sol. imidazole, which may carry alkyl, alkenyl, aryl, or aralkyl substituents, esp. 1-allylimidazole, 0.003-1 M is present during the pptn. at pH 5.5-6.5. Thus, into a starting soln. of pH 6 contg. gelatin 30 g and KBr 160 mg in water 1300 mL there were added AgNO3 and KBr by the double jet method at 63.degree. and at increasing addn. rates, 1st in 0.3 M 100 mL, and then at 0.2 M concn. 85 mL each. At **pAg** 9.6 2 M AgNO3 400 mL and 2 M KBr enough to maintain the **pAg** were added. The cooled, pptd., and washed emulsion was redispersed in a soln. of gelatin 55 g in water 430 mL. The octahedric crystals had a diam. of 0.50 .mu., if the starting soln. contained imidazole 2.7 g it was 0.90 .mu., with 9.0 g 1.4 .mu.. Coated as Au- and dye-sensitized emulsions, ripened at 69.degree., the relative speed of the samples were 100, 170, and 468 resp.

IT **616-47-7 1739-84-0 18999-45-6 20075-26-7 31410-01-2**
(photog. emulsion pptn. in presence of, high-speed, for increased grain size)

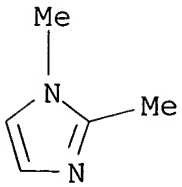
RN 616-47-7 HCA

CN 1H-Imidazole, 1-methyl- (9CI) (CA INDEX NAME)



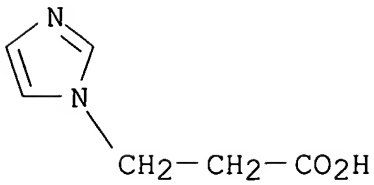
RN 1739-84-0 HCA

CN 1H-Imidazole, 1,2-dimethyl- (9CI) (CA INDEX NAME)

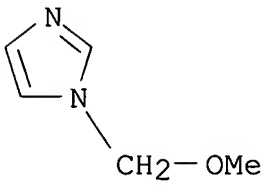


RN 18999-45-6 HCA

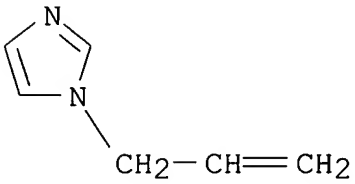
CN 1H-Imidazole-1-propanoic acid (9CI) (CA INDEX NAME)



RN 20075-26-7 HCA
CN 1H-Imidazole, 1-(methoxymethyl)- (9CI) (CA INDEX NAME)



RN 31410-01-2 HCA
CN 1H-Imidazole, 1-(2-propenyl)- (9CI) (CA INDEX NAME)



IC G03C001-02
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)
IT 288-32-4, uses and miscellaneous **616-47-7** 693-98-1 822-36-6 931-36-2 **1739-84-0 18999-45-6 20075-26-7 31410-01-2**
(photog. emulsion pptn. in presence of, high-speed, for increased grain size)

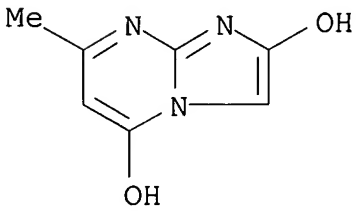
L46 ANSWER 14 OF 16 HCA COPYRIGHT 2006 ACS on STN
87:46564 Surface sensitive silver halide emulsion containing a silver complexing azaindene to reduce desensitization of optical sensitizing dye incorporated therein. Durning, Maurice Francis; Starr, John Edward (Eastman Kodak Co., USA). U.S. US 4011083 **19770308**, 8 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-708818 19760726.
AB An IR-sensitive photog. material employs a Ag halide

surface-sensitive emulsion spectrally sensitized with a dye having a polarog. cathodic halfwave potential more pos. than -1.20 V (in such a concn. that causes .apprx.0.3 log E desensitization) and contg. an azaindene deriv. which effectively reduces the desensitization. A photog. material thus produced exhibits high minus blue speed. The use of the azaindene deriv. permits the use of a higher dye concn. and results in an emulsion having excellent keeping qualities and a low fog level. Thus, to a S- and Au-sensitized Ag(Br,I) (2.5 mol% I) emulsion were added 3,3'-diethylselenadicarbocyanine iodide (IR sensitizer) 112, 3-ethyl-5-(3-piperidinoallylidene)rhodamine 88, 3,3'-diethyl-9-methylselenacarbocyanine iodide 22, and 4-hydroxy-6-methyl-1,3,3a,7-tetraazaindene (I) 1.8 mg/mol Ag. The emulsion was held for 15 min at 40.degree. with a resultant **pAg** of 8.7, combined with a surfactant and a hardener, coated on a gelatin-subbed poly(ethylene terephthalate) support as a 0.004 in. layer, dried, exposed in a wedge spectrograph for 0.01 s to a W light source through a Kodak Wratten 25 (red and IR transmitting) filter, and developed in Kodak D-19 developer at 20.degree. for 6 min to give a relative IR speed (beyond 700 nm) of 245 and a fog level of 0.02 vs. 100 and 0.02, resp, for a I-free control.

IT **52893-02-4**
(photog. silver halide emulsions contg. IR sensitizing dye and, for reduced desensitization)

RN 52893-02-4 HCA

CN Imidazo[1,2-a]pyrimidine-2,5-diol, 7-methyl- (6CI, 9CI) (CA INDEX NAME)



IC G03C001-34

INCL 096109000

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 2503-56-2 2683-90-1 52892-99-6 52893-00-2 **52893-02-4**
(photog. silver halide emulsions contg. IR sensitizing dye and, for reduced desensitization)

=> d his 147-

FILE 'REGISTRY' ENTERED AT 11:29:56 ON 14 JUN 2006

```
L47      274822 S L6 NOT PMS/CI

     FILE 'HCA' ENTERED AT 11:31:23 ON 14 JUN 2006
L48      110674 S L47
L49          41 S L48 AND L20
L50           5 S L49 NOT (L43 OR L44 OR L45 OR L46)
L51           0 S L50 AND 1840-2002/PY,PRY
L52         828 S L48 AND (L27 OR L28)
L53          33 S L52 AND (L30 OR L35 OR L36 OR L37)
L54          20 S L53 NOT (L43 OR L44 OR L45 OR L46)
L55          14 S L54 AND 1840-2002/PY,PRY


=> d l55 1-14 ti

L55  ANSWER 1 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Method for systemic drug delivery through the nail

L55  ANSWER 2 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Heat-developable photographic material giving high-contrast image

L55  ANSWER 3 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   UV- and thermally-curable epoxy-based adhesive
     formulation

L55  ANSWER 4 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Photothermographic material containing vinyl compound contrast
     improving agent, image recording, and image formation

L55  ANSWER 5 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Photothermographic material containing ethylenic compound having
     electron attracting group

L55  ANSWER 6 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Imaging medium and process for producing an image

L55  ANSWER 7 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Anionic IR-absorbing agent for photosensitive composition
     for planographic printing plate preparation

L55  ANSWER 8 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Use of Cationic Aerosol Photopolymerization To Form
     Silicone Microbeads in the Presence of Molecular Templates. [Erratum
     to document cited in CA124:261877]

L55  ANSWER 9 OF 14  HCA  COPYRIGHT 2006 ACS on STN
TI   Photoinitiator, photopolymerizing composition, radical
     generation, photosensitive material for lithographic
```

plate, and manufacture of lithographic plate

L55 ANSWER 10 OF 14 HCA COPYRIGHT 2006 ACS on STN
TI **Photosensitization** and photoprotection by some drugs, metabolites and other compounds

L55 ANSWER 11 OF 14 HCA COPYRIGHT 2006 ACS on STN
TI Method for obtaining improved image contrast in migration imaging members

L55 ANSWER 12 OF 14 HCA COPYRIGHT 2006 ACS on STN
TI Image-forming materials and imaging method using them

L55 ANSWER 13 OF 14 HCA COPYRIGHT 2006 ACS on STN
TI Use of Cationic Aerosol **Photopolymerization** To Form Silicone Microbeads in the Presence of Molecular Templates

L55 ANSWER 14 OF 14 HCA COPYRIGHT 2006 ACS on STN
TI Sensitizing photographic emulsions with ionic polyalkylene oxide salts

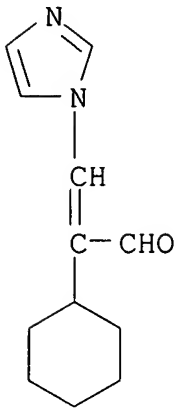
=> d l55 2,4,5,6,7,9,11,12 cbib abs hitstr hitind

L55 ANSWER 2 OF 14 HCA COPYRIGHT 2006 ACS on STN
139:76306 Heat-developable photographic material giving high-contrast image. Usakawa, Yasushi; Hanyu, Takeshi; Yasukawa, Hiroyuki (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2003186140 A2 20030703, 27 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-381446 20011214.

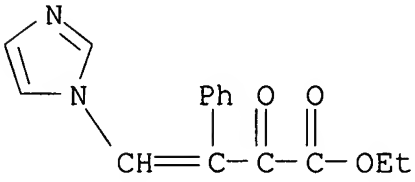
AB The material has a **photosensitive** layer contg. a **photosensitive** Ag halide on a support, wherein at least one of a **photosensitive** layer or a light-insensitive layer contains an org. Ag salt, a reducing agent, and CXW:CHA and/or CYA:CHR (X = substituted alkyl, substituted alkenyl, alkynyl, aryl, heterocyclic, halo, acyl, thioacyl, oxalyl, oxyoxalyl, -S-oxalyl, oxamoyl, oxycarbonyl, -S-carbonyl, carbamoyl, thiocarbamoyl, sulfonyl, sulfinyl, oxysulfonyl, -S-sulfonyl, sulfamoyl, oxysulfinyl, -S-sulfinyl, sulfinamoyl, phosphoryl, nitro, imino, N-carbonylimino, N-sulfonylimino, ammonium, **sulfonium**, phosphonium, pyrylium, immonium; W = H, alkyl, aryl, oxy, thio, amino, nonarom. heterocyclic, silyl; A = N-contg. arom. heterocyclic group linking through N in the ring; Y = H, substituent; R = halo, oxy, thio, amino, heterocyclic, silyl). Preferably, (a) the **photosensitive** Ag halide is doped with transition metal complexes and/or (b) the photog. material contains hydrazines. The material shows high sensitivity and low fogging even stored at high temp. and humidity.

IT **552301-51-6 552301-64-1 552301-76-5 552301-77-6**
(heat-developable photog. material using N-contg. heterocyclic double bond compds. for high-contrast image)

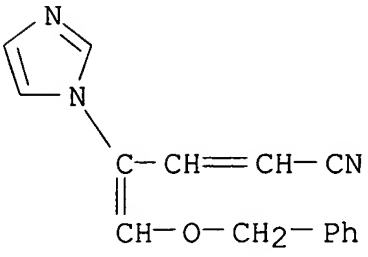
RN 552301-51-6 HCA
CN Cyclohexaneacetaldehyde, .alpha.-(1H-imidazol-1-ylmethylene)- (9CI) (CA INDEX NAME)



RN 552301-64-1 HCA
CN Benzenepropanoic acid, .beta.-(1H-imidazol-1-ylmethylene)-.alpha.-oxo-, ethyl ester (9CI) (CA INDEX NAME)

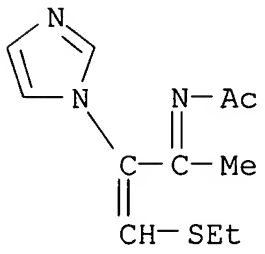


RN 552301-76-5 HCA
CN 2,4-Pentadienenitrile, 4-(1H-imidazol-1-yl)-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)



RN 552301-77-6 HCA

CN Acetamide, N-[3-(ethylthio)-2-(1H-imidazol-1-yl)-1-methyl-2-propenylidene]- (9CI) (CA INDEX NAME)



IC ICM G03C001-498
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Transition metal complexes
(dopant in **photosensitive** Ag halide; heat-developable photog. material using N-contg. heterocyclic double bond compds. for high-contrast image)
IT 14972-69-1, Sodium hexachloroosmate(III) 14972-70-4, Sodium hexachlororhodate(III) 14972-76-0, Sodium hexachlororuthenate(III) 21159-26-2 29857-38-3
(dopant in **photosensitive** Ag halide; heat-developable photog. material using N-contg. heterocyclic double bond compds. for high-contrast image)
IT 85598-48-7 **552301-51-6** 552301-52-7 552301-53-8
552301-54-9 552301-55-0 552301-56-1 552301-57-2 552301-58-3
552301-59-4 552301-60-7 552301-61-8 552301-62-9 552301-63-0
552301-64-1 552301-65-2 552301-66-3 552301-67-4
552301-68-5 552301-69-6 552301-70-9 552301-71-0 552301-72-1
552301-73-2 552301-74-3 552301-75-4 **552301-76-5**
552301-77-6
(heat-developable photog. material using N-contg. heterocyclic double bond compds. for high-contrast image)

L55 ANSWER 4 OF 14 HCA COPYRIGHT 2006 ACS on STN
135:336976 Photothermographic material containing vinyl compound contrast improving agent, image recording, and image formation. Kimura, Sok Man Ho (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2001296629 A2 **20011026**, 72 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-110489 20000412.
AB The material has a **light sensitive** layer on a support, contg. a light insensitive Ag salt, a **light sensitive** Ag halide grain sensitized with a chalcogen or a noble metal, a binder, a reducing agent, and a vinyl compd. XWC:CRH (X = electron attractive group; W = H, alkyl, alkenyl, alkynyl, aryl, heterocycle, halo, acyl, thioacyl, oxalyl, oxyoxalyl, thioxalyl, oxamoyl, oxycarbonyl, thiocarbonyl, carbamoyl,

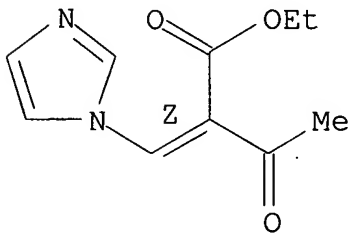
thiocarbamoyl, sulfonyl, sulfinyl, oxysulfonyl, thiosulfonyl, sulfamoyl, oxysulfinyl, thiosulfinyl, sulfinamoyl, phosphoryl, OH, alkoxy, aryloxy, heterocyclic oxy, mercapto, alkylthio, arylthio, heterocyclic thio, amino, alkylamino, aryl amino, heteroarylamino, acylamino, oxycarbonylamino, sulfonamide, oxysulfonylamino, ureido, sulfamoylamino, NO2, imidoyl, N-acylimidoyl, N-sulfonylimidoyl, dicyanoethylene, ammonium, **sulfonium**, pyrylium; R = halo, OH, alkoxy, aryloxy, heterocyclic oxy, alkenyloxy, acyloxy, alkoxycarbonyloxy, aminocarbonyloxy, mercapto, alkylthio, arylthio, heterocyclic thio, alkenylthio, acylthio, alkoxycarbonylthio, aminocarbonylthio, org. or inorg. salt of OH or mercapto, amino, alkylamino, cyclic amino, acylamino, oxycarbonylamino, heterocycle, ureido, sulfonamide; X and W, and X and R may form a ring). It is exposed by a longitudinal multimode IR laser scanner, where an angle between exposed surface and laser beam is within vertical for image recording. It is heated at 80-200.degree. for image formation. It showed high sensitivity, reduced fog, high Dmax, and improved sharpness, Ag tone, and raw-stock and image storage stability.

IT **366462-93-3**
(contrast improving agent; photothermog. material contg. vinyl compd. contrast improving agent)

RN 366462-93-3 HCA

CN Butanoic acid, 2-(1H-imidazol-1-ylmethylene)-3-oxo-, ethyl ester, (2Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IC ICM G03C001-498
ICS G03C001-498; G03C001-74; G03C005-08

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 87698-56-4 90049-73-3 120186-97-2 366462-88-6 366462-89-7
366462-91-1 **366462-93-3** 366462-98-8 366462-99-9
366463-00-5 366463-01-6
(contrast improving agent; photothermog. material contg. vinyl compd. contrast improving agent)

L55 ANSWER 5 OF 14 HCA COPYRIGHT 2006 ACS on STN
134:346505 Photothermographic material containing ethylenic compound

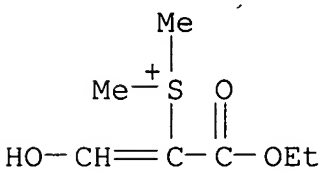
having electron attracting group. Usakawa, Yasushi; Hanyu, Takeshi; Takamukai, Yasuhiko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2001125224 A2 **20010511**, 67 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-246810 20000816. PRIORITY: JP 1999-230498 19990817.

AB The material comprises a **photosensitive** layer contg. an org. Ag salt, a reducing agent, and contrast improving agent XWC:CHR (X = electron attractive group except CN; W = H, alkyl, alkenyl, alkynyl, aryl, heterocycle, halo, acyl, thioacyl, oxalyl, oxyoxalyl, -S-oxalyl, oxamoyl, oxycarbonyl, -S-carbonyl, carbamoyl, thiocarbamoyl, sulfonyl, sulfinyl, oxysulfonyl, -S-sulfonyl, sulfamoyl, oxysulfinyl, -S-sulfinyl, sulfinamoyl, phosphoryl, nitro, imino, N-carbonylimino, N-sulfonylimino, ammonium, **sulfonium**, phosphonium, pyrylium, ammonium; R = halo, oxy, thio, amino, heterocycle) on .gtoreq.1 side of a support. It shows high sensitivity, reduced fog, and high contrast and dot reprodn. quality.

IT **338766-79-3 338766-87-3 338767-29-6 338767-30-9 338767-37-6 338767-63-8 338768-23-3 338768-24-4**
(photothermog. material contg. ethylenic compd. having electron attracting group)

RN 338766-79-3 HCA

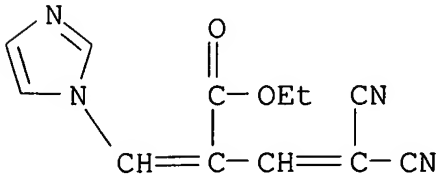
CN Sulfonium, [1-(ethoxycarbonyl)-2-hydroxyethenyl]dimethyl-, chloride (9CI) (CA INDEX NAME)



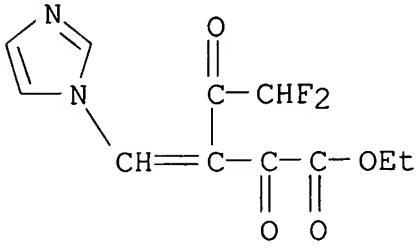
● Cl^-

RN 338766-87-3 HCA

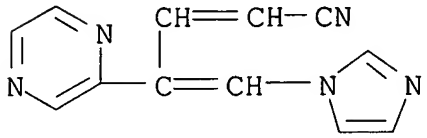
CN 3-Butenoic acid, 4,4-dicyano-2-(1H-imidazol-1-ylmethylene)-, ethyl ester (9CI) (CA INDEX NAME)



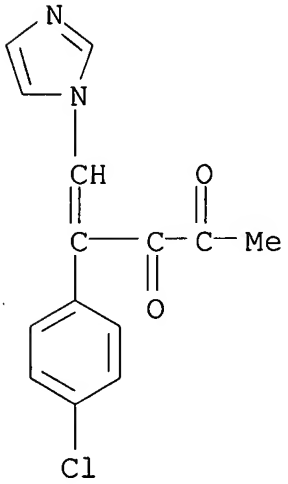
RN 338767-29-6 HCA
CN Pentanoic acid, 5,5-difluoro-3-(1H-imidazol-1-ylmethylene)-2,4-dioxo-, ethyl ester (9CI) (CA INDEX NAME)



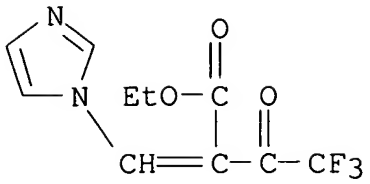
RN 338767-30-9 HCA
CN 2,4-Pentadienenitrile, 5-(1H-imidazol-1-yl)-4-pyrazinyl- (9CI) (CA INDEX NAME)



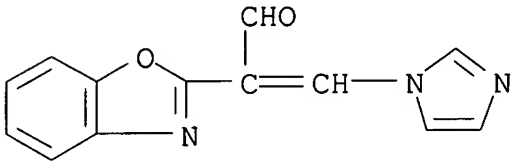
RN 338767-37-6 HCA
CN 4-Pentene-2,3-dione, 4-(4-chlorophenyl)-5-(1H-imidazol-1-yl)- (9CI) (CA INDEX NAME)



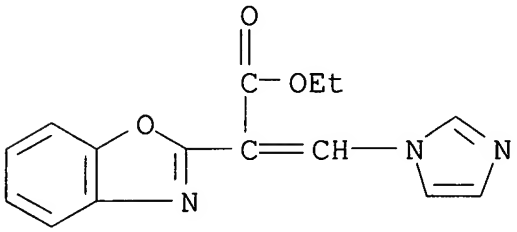
RN 338767-63-8 HCA
CN Butanoic acid, 4,4,4-trifluoro-2-(1H-imidazol-1-ylmethylene)-3-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 338768-23-3 HCA
CN 2-Benzoxazoleacetaldehyde, .alpha.-(1H-imidazol-1-ylmethylene)- (9CI) (CA INDEX NAME)



RN 338768-24-4 HCA
CN 2-Benzoxazoleacetic acid, .alpha.-(1H-imidazol-1-ylmethylene)-, ethyl ester (9CI) (CA INDEX NAME)



IC ICM G03C001-498
ICS G03C001-498
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 10229-12-6 55130-42-2 70450-66-7 75762-38-8 95322-54-6
105151-40-4 318236-24-7 318236-25-8 318236-26-9 318236-27-0
321530-34-1 335382-84-8 338766-61-3 338766-62-4 338766-63-5
338766-64-6 338766-65-7 338766-66-8 338766-67-9 338766-68-0
338766-69-1 338766-71-5 338766-73-7 338766-74-8 338766-75-9
338766-76-0 338766-77-1 338766-78-2 **338766-79-3**
338766-80-6 338766-81-7 338766-82-8 338766-83-9 338766-84-0
338766-85-1 338766-86-2 **338766-87-3** 338766-88-4
338766-89-5 338766-90-8 338766-91-9 338766-92-0 338766-93-1
338766-94-2 338766-95-3 338766-96-4 338766-98-6 338766-99-7
338767-00-3 338767-02-5 338767-04-7 338767-06-9 338767-07-0

338767-08-1 338767-09-2 338767-10-5 338767-11-6 338767-12-7
338767-13-8 338767-14-9 338767-15-0 338767-16-1 338767-17-2
338767-18-3 338767-19-4 338767-20-7 338767-21-8 338767-22-9
338767-23-0 338767-24-1 338767-25-2 338767-26-3 338767-27-4
338767-28-5 **338767-29-6 338767-30-9**
338767-31-0 338767-32-1 338767-33-2 338767-34-3 338767-35-4
338767-36-5 **338767-37-6** 338767-39-8 338767-40-1
338767-41-2 338767-42-3 338767-43-4 338767-44-5 338767-45-6
338767-46-7 338767-47-8 338767-48-9 338767-49-0 338767-50-3
338767-51-4 338767-52-5 338767-53-6 338767-54-7 338767-55-8
338767-56-9 338767-57-0 338767-58-1 338767-59-2 338767-60-5
338767-61-6 338767-62-7 **338767-63-8** 338767-64-9
338767-65-0 338767-66-1 338767-67-2 338767-68-3 338767-69-4
338767-70-7 338767-71-8 338767-72-9 338767-73-0 338767-74-1
338767-75-2 338767-76-3 338767-77-4 338767-78-5 338767-79-6
338767-80-9 338767-81-0 338767-82-1 338767-83-2 338767-84-3
338767-85-4 338767-86-5 338767-87-6 338767-88-7 338767-90-1
338767-91-2 338767-92-3 338767-93-4 338767-94-5 338767-95-6
338767-96-7 338767-97-8 338767-98-9 338767-99-0 338768-00-6
338768-02-8 338768-03-9 338768-04-0 338768-05-1 338768-06-2
338768-07-3 338768-08-4 338768-09-5 338768-10-8 338768-11-9
338768-12-0 338768-13-1 338768-14-2 338768-15-3 338768-16-4
338768-17-5 338768-18-6 338768-19-7 338768-20-0 338768-21-1
338768-22-2 **338768-23-3 338768-24-4**
338768-25-5
(photothermog. material contg. ethylenic compd. having electron attracting group)

L55 ANSWER 6 OF 14 HCA COPYRIGHT 2006 ACS on STN
132:57127 Imaging medium and process for producing an image. Gaudiana, Russell A.; Haddock, Robert W.; Haque, Serajul; Kliman, Bloom Iris B.; Marshall, John L.; Ramos, Socorro M.; Takiff, Larry C.; Telfer, Stephen J.; Young, Michael A. (Polaroid Corp., USA). U.S. US 6004719 A **19991221**, 36 pp., Cont.-in-part of U.S. 5,631,118. (English). CODEN: USXXAM. APPLICATION: US 1997-858659 19970519. PRIORITY: US 1994-232725 19940425; US 1995-430420 19950428.

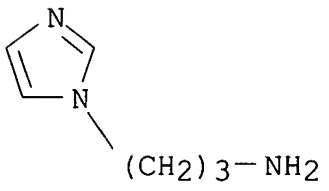
AB A process for producing an image uses an imaging medium comprising an acid-generating layer or phase comprising a mixt. of a superacid precursor, a sensitizing dye and a secondary acid generator, and a color-change layer comprising an image dye. The sensitizing dye has 1st and 2nd forms, the 1st form having substantially greater substantial absorption in a 1st wavelength range than the 2nd form. The superacid precursor is not capable, in the absence of the 1st form of the sensitizing dye, of being decompd. by radiation in the 1st wavelength range. The secondary acid generator is capable of thermal decompn., catalyzed by superacid, to form a secondary acid. While at least part of the sensitizing dye is in its 1st form, the

medium is imagewise exposed to radiation in the 1st wavelength range, thereby causing, in the exposed areas of the acid-generating layer, the formation of superacid. The medium is then heated to cause, in the exposed areas, thermal decompn. of the secondary acid generator, catalyzed by the superacid, and formation of the secondary acid. The components of the acid-generating and color-change layers or phases are then mixed so that the secondary acid causes a change in color of the image dye, and the sensitizing dye is converted to its 2nd form. The acid-generating layer or phase desirably includes a cosensitizer which is a reducing agent less basic than the secondary acid generator.

IT **5036-48-6**, (1-(3-Aminopropyl)imidazole
(amine base for decolorizing sensitizing dye for imaging medium)

RN 5036-48-6 HCA

CN 1H-Imidazole-1-propanamine (9CI) (CA INDEX NAME)



not together w/PAG

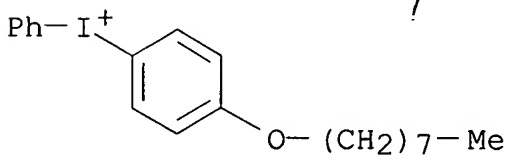
IT **121239-75-6**, [4-Octyloxyphenyl]**phenyliodonium** hexafluoroantimonate
(indicator dye for imaging medium and process for producing image)

RN 121239-75-6 HCA

CN Iodonium, [4-(octyloxy)phenyl]phenyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

CM 1

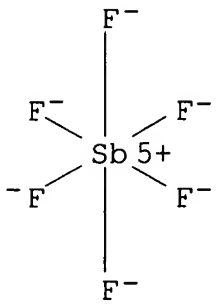
CRN 121239-74-5
CMF C20 H26 I O



CM 2

CRN 17111-95-4

CMF F6 Sb
CCI CCS



IC ICM G03C001-492
ICS G03C001-494; G03C001-76
INCL 430270100
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Dyes
(**photosensitizing**; amine base for decolorizing sensitizing dye for imaging medium)
IT **5036-48-6**, (1-(3-Aminopropyl)imidazole
(amine base for decolorizing sensitizing dye for imaging medium)
IT 88-58-4 603-34-9, Triphenylamine 1150-62-5, n-Phenylcarbazole 4316-58-9, Tri(p-bromophenyl)amine 19264-74-5
(co-sensitizer for imaging medium using a **photosensitizing** dye)
IT 9003-53-6, Polystyrene 25038-59-9, Poly(ethylene terephthalate), reactions **121239-75-6**, [4-Octyloxyphenyl] **phenyliodonium** hexafluoroantimonate 191157-76-3 227314-96-7
(indicator dye for imaging medium and process for producing image)
IT 29636-94-0P 33567-23-6P 54136-24-2P 113954-27-1P 170633-98-4P 170633-99-5P 252916-03-3P 252916-05-5P 252916-07-7P
(**photosensitizing** dye for deprotonation in imaging medium and process for producing image)
IT 87220-68-6P, 9-Phenylcarbazole-3-carboxaldehyde 252916-09-9P 252916-11-3P 252916-13-5P 252916-14-6P 252916-16-8P
(**photosensitizing** dye for imaging medium and process for producing image)
IT 252916-26-0
(secondary acid generator for imaging medium using a **photosensitizing** dye)

L55 ANSWER 7 OF 14 HCA COPYRIGHT 2006 ACS on STN

131:264797 Anionic IR-absorbing agent for **photosensitive** composition for planographic printing plate preparation. Nakamura, Tatsuo; Kunita, Kazuto; Morishima, Shinichi (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 945264 A1 **19990929**, 81 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1999-105081 19990324. PRIORITY: JP 1998-79912 19980326; JP 1998-237634 19980824; JP 1998-270097 19980924.

AB Disclosed is a pos. **photosensitive** compn. that has high sensitivity, good latitude in development, and good storage stability and is for use in planog. printing plate prepn. using an IR laser and a novel anionic IR-absorbing agent. The **photosensitive** compn. comprises (a) an anionic IR-absorbing agent and (b) a polymeric compd. that is insol. in water but sol. in an aq. alk. soln. so that the compn. becomes sol. in the aq. alk. soln. when irradiated with the IR laser. Preferably, the anionic IR-absorbing agent is an anionic metal complex, anionic carbon black, an anionic phthalocyanine pigment, or a compd. represented by the general formula (Ga-MGb)Xm+ where M represents a conjugated chain, Ga- represents an anionic substituent group, Gb represents a neutral substituent group, and Xm+ represents a cation including a proton, the cation having a valence of from 1 to m, wherein m represents an integer ranging from 1 to 6.

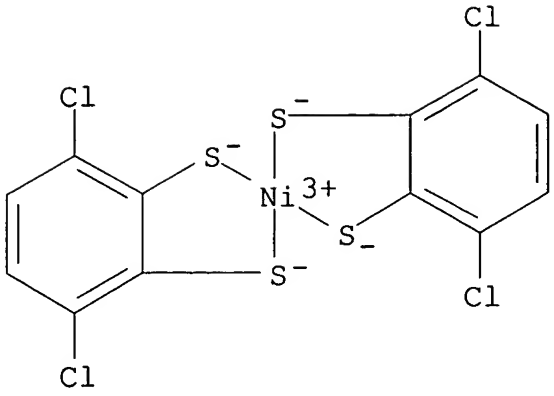
IT **244606-68-6 244606-69-7 244606-74-4 244606-78-8**
(IR-absorbing agent for **photosensitive** compns. for planog. printing plate prepn.)

RN 244606-68-6 HCA

CN Iodonium, diphenyl-, bis[3,6-dichloro-1,2-benzenedithiolato(2-)-.kappa.S,.kappa.S']nickelate(1-) (9CI) (CA INDEX NAME)

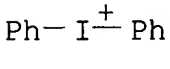
CM 1

CRN 87314-13-4
CMF C12 H4 Cl4 Ni S4
CCI CCS



CM 2

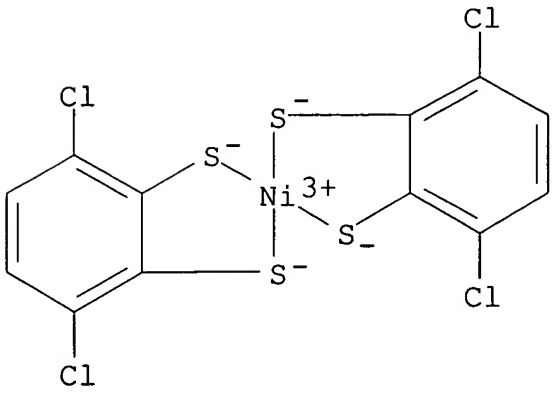
CRN 10182-84-0
CMF C12 H10 I



RN 244606-69-7 HCA
CN Sulfonium, triphenyl-, bis[3,6-dichloro-1,2-benzenedithiolato(2-)-.kappa.S,.kappa.S']nickelate(1-) (9CI) (CA INDEX NAME)

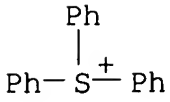
CM 1

CRN 87314-13-4
CMF C12 H4 Cl4 Ni S4
CCI CCS



CM 2

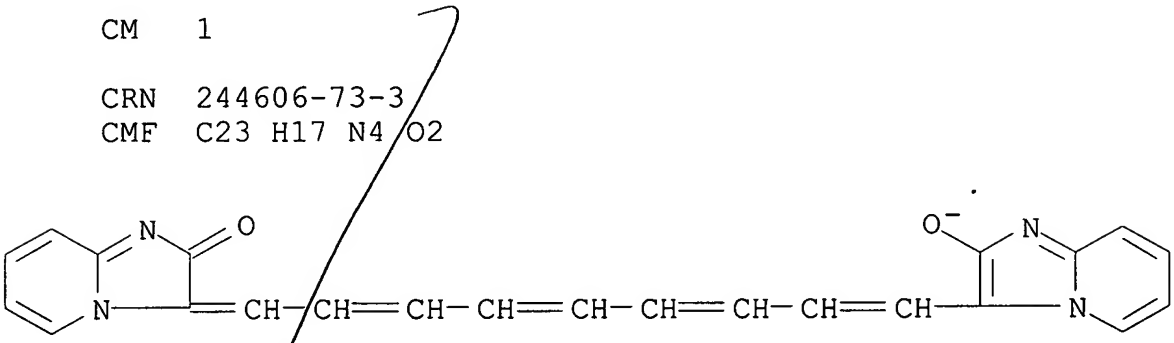
CRN 18393-55-0
CMF C18 H15 S



RN 244606-74-4 HCA
CN 3H-Indolium, 1,2,3,3-tetramethyl-, salt with 3-[9-(2-hydroxyimidazo[1,2-a]pyridin-3-yl)-2,4,6,8-nonatetraenylidene]imidazo[1,2-a]pyridin-2(3H)-one (1:1) (9CI) (CA INDEX NAME)

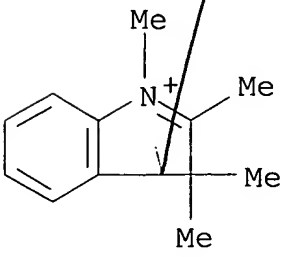
CM 1

CRN 244606-73-3
CMF C23 H17 N4 O2



CM 2

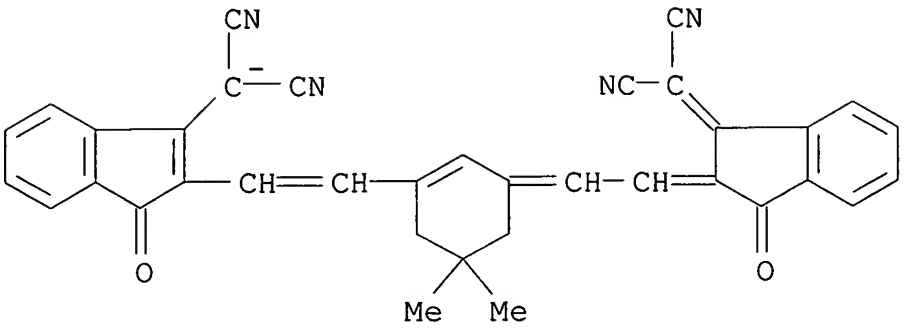
CRN 46149-03-5
CMF C12 H16 N



RN 244606-78-8 HCA
CN Sulfonium, 1,6-hexanediylbis[dimethyl-, salt with [2-[[3-[2-[3-(dicyanomethyl)-1-oxo-1H-inden-2-yl]ethenyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]ethylidene]-2,3-dihydro-3-oxo-1H-inden-1-ylidene]propanedinitrile (1:2) (9CI) (CA INDEX NAME)

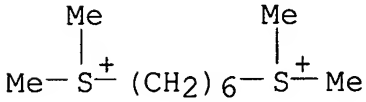
CM 1

CRN 244606-77-7
CMF C36 H23 N4 O2



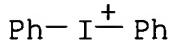
CM 2

CRN 15912-84-2
CMF C10 H24 S2

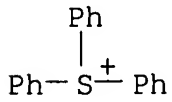


IT **10182-84-0DP, Diphenyliodonium**, complex with oxidized carbon black **18393-55-0DP**, complex with oxidized carbon black **244606-53-9P 244606-54-0P 244606-57-3P 244606-58-4P 244606-61-9P 244606-62-0P 244606-65-3P 244606-66-4P**
(prepn. and use as IR-absorbing agent for **photosensitive** compns. for planog. printing plate prepn.)

RN 10182-84-0 HCA
CN Iodonium, diphenyl- (8CI, 9CI) (CA INDEX NAME)



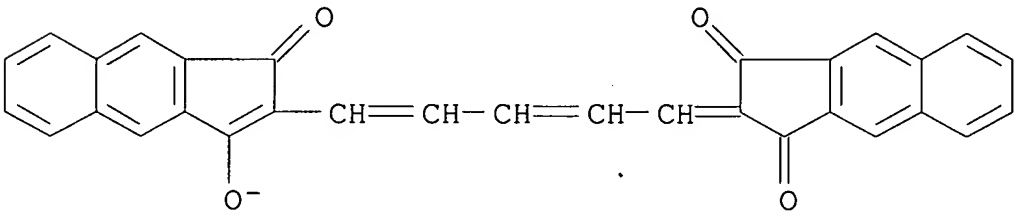
RN 18393-55-0 HCA
CN Sulfonium, triphenyl- (8CI, 9CI) (CA INDEX NAME)



RN 244606-53-9 HCA
CN Iodonium, diphenyl-, salt with 2-[5-(3-hydroxy-1-oxo-1H-benz[f]inden-2-yl)-2,4-pentadienylidene]-1H-benz[f]indene-1,3(2H)-dione (1:1) (9CI) (CA INDEX NAME)

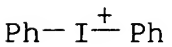
CM 1

CRN 220402-05-1
CMF C31 H17 O4



CM 2

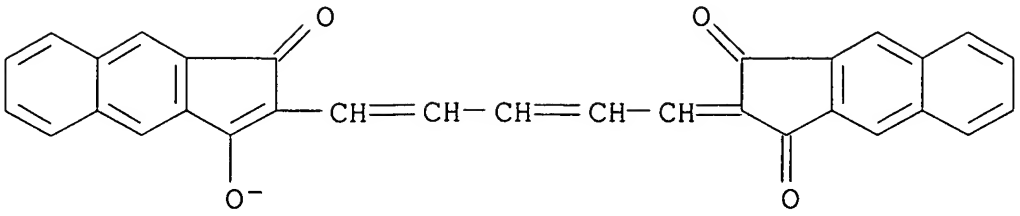
CRN 10182-84-0
CMF C12 H10 I



RN 244606-54-0 HCA
CN Sulfonium, triphenyl-, salt with 2-[5-(3-hydroxy-1-oxo-1H-benz[f]inden-2-yl)-2,4-pentadienylidene]-1H-benz[f]indene-1,3(2H)-dione (1:1) (9CI) (CA INDEX NAME)

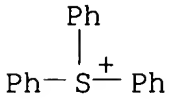
CM 1

CRN 220402-05-1
CMF C31 H17 O4



CM 2

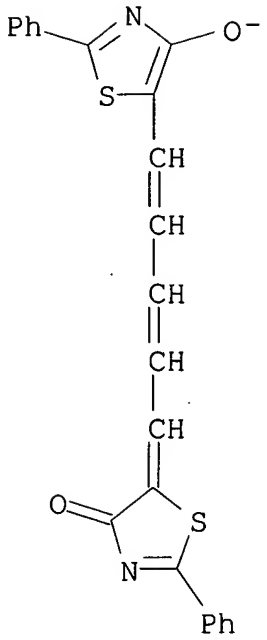
CRN 18393-55-0
CMF C18 H15 S



RN 244606-57-3 HCA
CN Iodonium, diphenyl-, salt with 5-[5-(4-hydroxy-2-phenyl-5-thiazolyl)-2,4-pentadienylidene]-4(5H)-thiazolone (1:1) (9CI) (CA INDEX NAME)

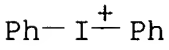
CM 1

CRN 244606-55-1
CMF C23 H15 N2 O2 S2



CM 2

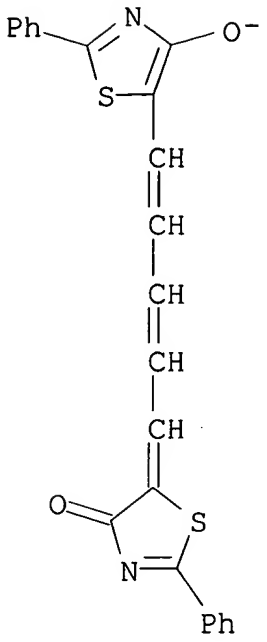
CRN 10182-84-0
CMF C12 H10 I



RN 244606-58-4 HCA
CN Sulfonium, triphenyl-, salt with 5-[5-(4-hydroxy-2-phenyl-5-thiazolyl)-2,4-pentadienylidene]-4(5H)-thiazolone (1:1) (9CI) (CA INDEX NAME)

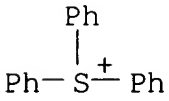
CM 1

CRN 244606-55-1
CMF C23 H15 N2 O2 S2



CM 2

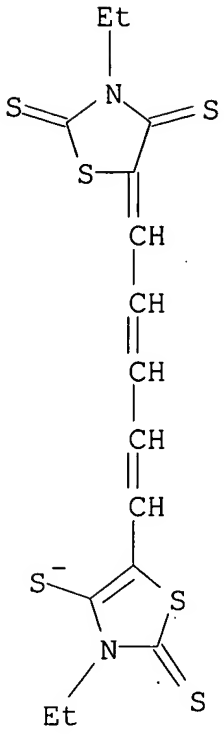
CRN 18393-55-0
CMF C18 H15 S



RN 244606-61-9 HCA
CN Iodonium, diphenyl-, salt with 3-ethyl-5-[5-(3-ethyl-2,3-dihydro-4-mercapto-2-thioxo-5-thiazolyl)-2,4-pentadienylidene]-2,4-thiazolidinedithione (1:1) (9CI) (CA INDEX NAME)

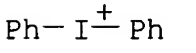
CM 1

CRN 244606-59-5
CMF C15 H15 N2 S6



CM 2

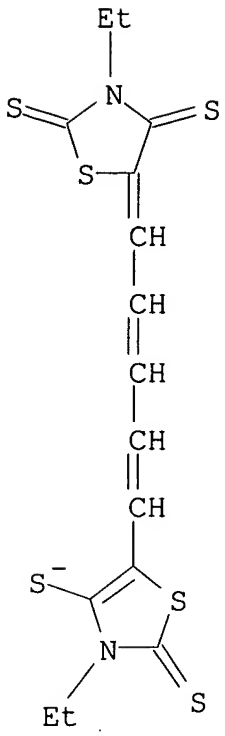
CRN 10182-84-0
CMF C12 H10 I



RN 244606-62-0 HCA
CN Sulfonium, triphenyl-, salt with 3-ethyl-5-[5-(3-ethyl-2,3-dihydro-4-mercapto-2-thioxo-5-thiazolyl)-2,4-pentadienylidene]-2,4-thiazolidinedithione (1:1) (9CI) (CA INDEX NAME)

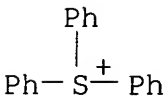
CM 1

CRN 244606-59-5
CMF C15 H15 N2 S6



CM 2

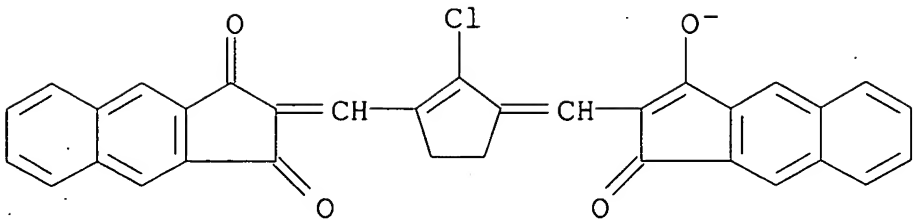
CRN 18393-55-0
CMF C18 H15 S



RN 244606-65-3 HCA
CN Iodonium, diphenyl-, salt with 2-[[2-chloro-3-[(3-hydroxy-1-oxo-1H-benz[f]inden-2-yl)methylene]-1-cyclopenten-1-yl]methylene]-1H-benz[f]indene-1,3(2H)-dione (1:1) (9CI) (CA INDEX NAME)

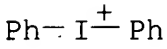
CM 1

CRN 244606-63-1
CMF C33 H18 Cl O4



CM 2

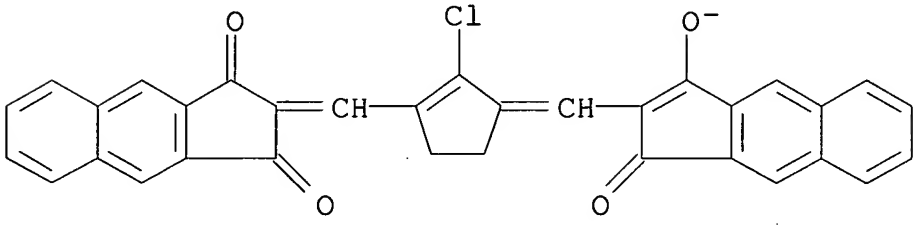
CRN 10182-84-0
CMF C12 H10 I



RN 244606-66-4 HCA
CN Sulfonium, triphenyl-, salt with 2-[[2-chloro-3-[(3-hydroxy-1-oxo-1H-benz[f]inden-2-yl)methylene]-1-cyclopenten-1-yl]methylene]-1H-benz[f]indene-1,3(2H)-dione (1:1) (9CI) (CA INDEX NAME)

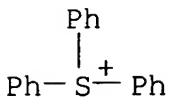
CM 1

CRN 244606-63-1
CMF C33 H18 Cl O4



CM 2

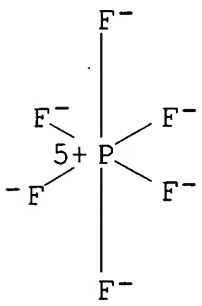
CRN 18393-55-0
CMF C18 H15 S



IT **58109-40-3, Diphenyliodonium** hexafluorophosphate
(reaction in prepg. IR-absorbing agent for **photosensitive** compn. for planog. printing plate prepn.)
RN 58109-40-3 HCA
CN Iodonium, diphenyl-, hexafluorophosphate(1-) (9CI) (CA INDEX NAME)

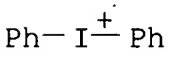
CM 1

CRN 16919-18-9
CMF F6 P
CCI CCS



CM 2

CRN 10182-84-0
CMF C12 H10 I

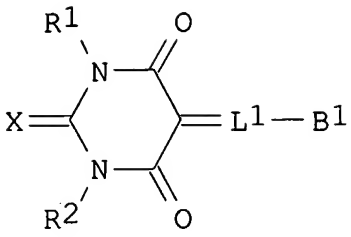


IC ICM B41C001-10
ICS B41M005-36; C09B023-08; B41M005-40
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT Carbon black, uses
(oxidized, complexes with di-Ph **iodonium** and **triphenylsulfonium** and anilinomethoxybenzenediazonium; **photosensitive** compns. contg. anionic IR-absorbing agents for prepn. of)

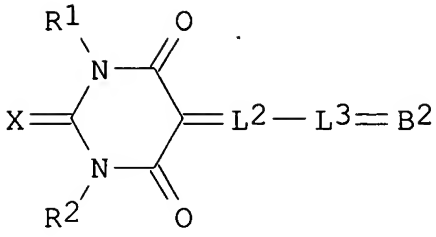
IT Printing plates
(planog.; **photosensitive** compns. contg. anionic IR-absorbing agents for prepn. of)
IT 244606-67-5 **244606-68-6** **244606-69-7**
244606-72-2 **244606-74-4** 244606-76-6 **244606-78-8**
244606-80-2 244606-82-4 244606-83-5 244606-85-7 244606-87-9
244606-88-0 244606-90-4
(IR-absorbing agent for **photosensitive** compns. for planog. printing plate prepn.)
IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 117283-53-1
(**photosensitive** compn. for planog. printing plate prepn. contg. anionic IR-absorbing agents and)
IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide
(prepn. and reaction in prepg. acrylic copolymers for **photosensitive** compns. for planog. printing plate prepn.)
IT **10182-84-0DP, Diphenyliodonium**, complex with oxidized carbon black **18393-55-0DP**, complex with oxidized carbon black 32445-12-8DP, reaction products with oxidized carbon black 244606-51-7P 244606-52-8P **244606-53-9P**
244606-54-0P 244606-56-2P **244606-57-3P**
244606-58-4P 244606-60-8P **244606-61-9P**
244606-62-0P 244606-64-2P **244606-65-3P**
244606-66-4P 244606-71-1P
(prepn. and use as IR-absorbing agent for **photosensitive** compns. for planog. printing plate prepn.)
IT 124996-93-6P, Acrylonitrile-ethyl methacrylate-N-(p-aminosulfonylphenyl)methacrylamide copolymer
(prepn. and use in prepg. **photosensitive** compns. for planog. printing plate prepn.)
IT 130-03-0, Benzo[b]thiophen-3(2H)-one 1497-49-0 2397-90-2
10428-58-7 22734-61-8, 1H-Benz[f]indene-1,3(2H)-dione 36305-05-2
58109-40-3, Diphenyliodonium hexafluorophosphate
68339-59-3
(reaction in prepg. IR-absorbing agent for **photosensitive** compn. for planog. printing plate prepn.)
IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid, reactions
(reaction in prepg. acrylic copolymers for **photosensitive** compns. for planog. printing plate prepn.)

L55 ANSWER 9 OF 14 HCA COPYRIGHT 2006 ACS on STN
128:210887 Photoinitiator, **photopolymerizing** composition, radical generation, **photosensitive** material for lithographic plate, and manufacture of lithographic plate. Okubo, Kimihiko; Nakayama, Noritaka (Konica Co., Japan; Konica Minolta Holdings Inc.). Jpn. Kokai Tokkyo Koho JP 10039499 A2 **19980213** Heisei, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-194675 19960724.

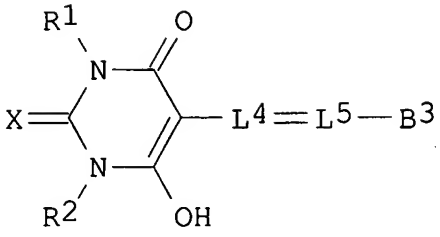
GI



I



II



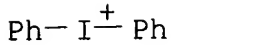
III

AB The title photoinitiator contains a radical-generating agent and a dye I, II or III (R1, R2 = H or monovalent substituent; X = O or S; L1-5 N or methine group; B1-3 = 5- or 6-membered arom. ring residue or heterocyclic ring residue). The title compn. contains the photoinitiator and an ethylenic unsatd. bond-contg. compd. The photoinitiator and the compn. may contain a titanocene compd. and a dye II or III. The photoinitiator is exposed with a laser beam of wavelength 488 or 532 nm to generate a radical. The title material comprises a hydrophilic support coated with a **photosensitive** layer contg. a compd. having .gtoreq.1 ethylenic unsatd. bond, a binder, and the **photopolymg.** compn. and then with a protective layer and is imagewise scanning-exposed with a laser beam of wavelength 488 or 532 nm and developed to remove the unexposed area of the both layers to give a lithog. plate. The photoinitiator and the compn. show high sensitivity at near 488 and 532 nm and provide high resoln. images and the material exhibits good storage stability.

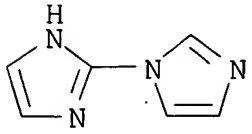
IT **10182-84-0D, Diphenyliodonium**, salts
110700-40-8D, 1,2'-Bi-1H-imidazole, derivs.
(**photopolymn.** initiator contg. radical generating agent and dye)

RN 10182-84-0 HCA

CN Iodonium, diphenyl- (8CI, 9CI) (CA INDEX NAME)



RN 110700-40-8 HCA
CN 1,2'-Bi-1H-imidazole (9CI) (CA INDEX NAME)



IC ICM G03F007-004
ICS G03F007-00; G03F007-027; G03F007-031; G03F007-038; G03F007-20
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **photopolymn** initiator radical generator dye; presensitized lithog plate **photopolymn** compn
IT Polymerization catalysts
(**photopolymn.**; **photopolymn.** initiator contg. radical generating agent and dye)
IT Lithographic plates
(presensitized; **photopolymg.** compn. for presensitized lithog. plate)
IT 57592-66-2, Pentaerythritol tetraacrylate homopolymer
(**photopolymg.** compn. for presensitized lithog. plate)
IT 6542-67-2 **10182-84-0D, Diphenyliodonium,** salts
32760-80-8 77473-08-6, BTTB **110700-40-8D,**
1,2'-Bi-1H-imidazole, derivs. 125051-32-3 203943-51-5
203943-53-7D, derivs. 203943-54-8 203943-55-9 203943-56-0
203943-57-1
(**photopolymn.** initiator contg. radical generating agent and dye)
IT 203943-52-6P 203943-58-2P
(**photopolymn.** initiator contg. radical generating agent and dye)
IT 2243-30-3, Pentamethylaniline 2382-96-9, 2(3H)-Benzoxazolethione
(polymn. accelerator; **photopolymn.** initiator contg. radical generating agent and dye)

L55 ANSWER 11 OF 14 HCA COPYRIGHT 2006 ACS on STN
125:127644 Method for obtaining improved image contrast in migration imaging members. Limburg, William W.; Mammino, Joseph; Liebermann, George; Griffiths, Clifford H.; Shahin, Michael M.; Malhotra, Shadi L.; Chen, Liqin; Perron, Marie-Eve (Xerox Corp., USA). U.S. US 5514505 A **19960507**, 147 pp. (English). CODEN: USXXAM.

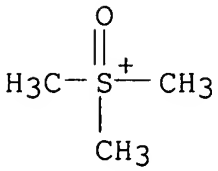
APPLICATION: US 1995-441360 19950515.

AB Disclosed is a process which comprises (a) providing a migration imaging member comprising (1) a substrate and (2) a softenable layer comprising a softenable material and a **photosensitive** migration marking material present in the softenable layer as a monolayer of particles situated at or near the surface of the softenable layer spaced from the substrate, (b) uniformly charging the imaging member, (c) imagewise exposing the charged imaging member to activating radiation at a wavelength to which the migration marking material is sensitive, (d) causing the softenable material to soften and enabling a first portion of the migration marking material to migrate through the softenable material toward the substrate in an imagewise pattern while a second portion of the migration marking material remains substantially unmigrated within the softenable layer, and (e) contacting the second portion of the migration marking material with a transparentizing agent which transparentizes the migration marking material.

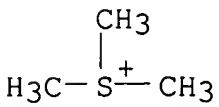
IT **1774-47-6**, Trimethylsulfoxonium iodide **2181-42-2**, **Trimethylsulfonium** iodide **2181-44-4**, **Trimethylsulfonium** methylsulfate **2466-76-4**, 1-Acetylimidazole **2851-95-8**, 2-Methyl-1-vinylimidazole **3493-12-7**, (3-Amino-3-carboxypropyl) **dimethylsulfonium** chloride **4316-42-1**, 1-Butylimidazole **5034-06-0**, Trimethylsulfoxonium chloride **5036-48-6**, 1H-Imidazole-1-propanamine **7036-61-5**, Propyl-1-(1-phenylethyl)imidazole-5-carboxylate hydrochloride **13750-62-4**, 1-Benzyl-2-methylimidazole **25059-70-5**, (2-Chloroethyl)**dimethylsulfonium** iodide **33462-80-5**, 3-(Chloropropyl)**diphenylsulfonium** tetrafluoroborate **52547-07-6 59218-87-0**, Tris(dimethylamino) **sulfonium** difluorotrimethyl silicate **64415-08-3**
(transparentizing agent for electrophotog. migration imaging members)

RN 1774-47-6 HCA

CN Sulfoxonium, trimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)



RN 2181-42-2 HCA
CN Sulfonium, trimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)

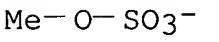


● I^-

RN 2181-44-4 HCA
CN Sulfonium, trimethyl-, methyl sulfate (8CI, 9CI) (CA INDEX NAME)

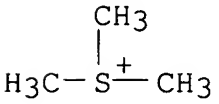
CM 1

CRN 21228-90-0
CMF C H3 O4 S

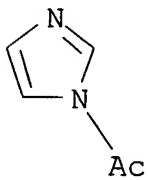


CM 2

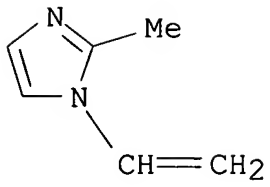
CRN 676-84-6
CMF C3 H9 S



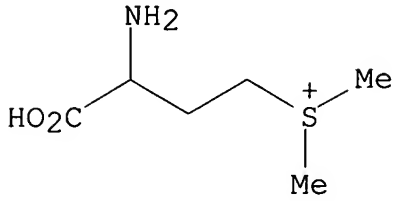
RN 2466-76-4 HCA
CN 1H-Imidazole, 1-acetyl- (9CI) (CA INDEX NAME)



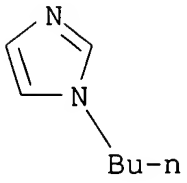
RN 2851-95-8 HCA
CN 1H-Imidazole, 1-ethenyl-2-methyl- (9CI) (CA INDEX NAME)



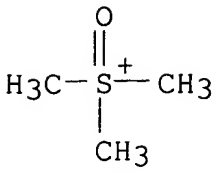
RN 3493-12-7 HCA
CN Sulfonium, (3-amino-3-carboxypropyl)dimethyl-, chloride (9CI) (CA INDEX NAME)



RN 4316-42-1 HCA
CN 1H-Imidazole, 1-butyl- (9CI) (CA INDEX NAME)

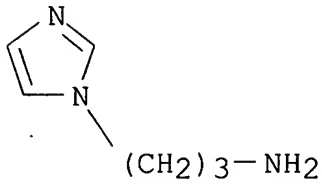


RN 5034-06-0 HCA
CN Sulfoxonium, trimethyl-, chloride (8CI, 9CI) (CA INDEX NAME)

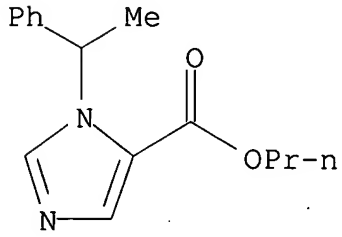


● Cl⁻

RN 5036-48-6 HCA
CN 1H-Imidazole-1-propanamine (9CI) (CA INDEX NAME)

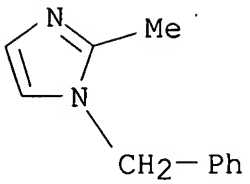


RN 7036-61-5 HCA
CN 1H-Imidazole-5-carboxylic acid, 1-(1-phenylethyl)-, propyl ester, monohydrochloride (9CI) (CA INDEX NAME)

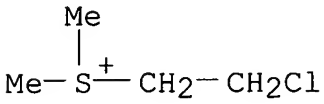


● HCl

RN 13750-62-4 HCA
CN 1H-Imidazole, 2-methyl-1-(phenylmethyl)- (9CI) (CA INDEX NAME)



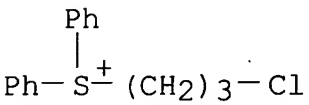
RN 25059-70-5 HCA
CN Sulfonium, (2-chloroethyl)dimethyl-, iodide (8CI, 9CI) (CA INDEX NAME)



RN 33462-80-5 HCA
CN Sulfonium, (3-chloropropyl)diphenyl-, tetrafluoroborate(1-) (8CI, 9CI) (CA INDEX NAME)

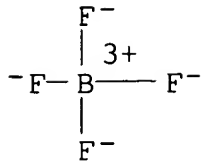
CM 1

CRN 46799-33-1
CMF C15 H16 Cl S

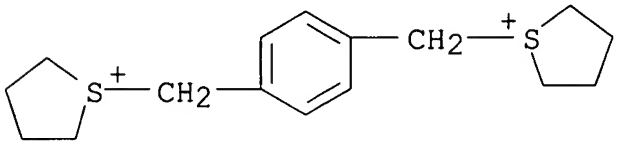


CM 2

CRN 14874-70-5
CMF B F4
CCI CCS



RN 52547-07-6 HCA
CN Thiophenium, 1,1'-[1,4-phenylenebis(methylene)]bis[tetrahydro-, dichloride (9CI) (CA INDEX NAME)

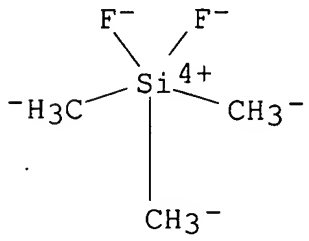


●2 Cl⁻

RN 59218-87-0 HCA
CN Sulfiliminium, S,S-bis(dimethylamino)-N,N-dimethyl-, difluorotrimethylsilicate(1-) (9CI) (CA INDEX NAME)

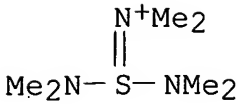
CM 1

CRN 51202-29-0
CMF C3 H9 F2 Si
CCI CCS

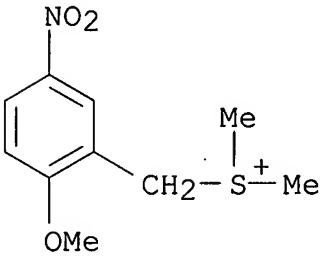


CM 2

CRN 44873-77-0
CMF C6 H18 N3 S



RN 64415-08-3 HCA
CN Sulfonium, [(2-methoxy-5-nitrophenyl)methyl]dimethyl-, bromide (9CI) (CA INDEX NAME)



● Br^-

IC ICM G03G017-10
INCL 430041000
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

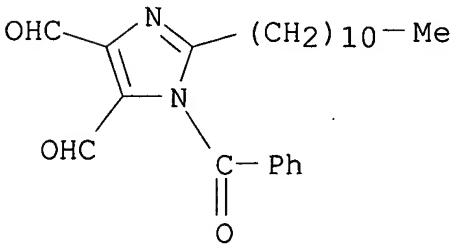
L55 ANSWER 12 OF 14 HCA COPYRIGHT 2006 ACS on STN
125:71654 Image-forming materials and imaging method using them. Takeyama, Toshihisa; Nakayama, Noritaka (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 08054706 A2 **19960227** Heisei, 34 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-190646 19940812.
GI For diagram(s), see printed CA Issue.
AB The title materials comprise a substrate coated successively with a layer contg. a Co complex [Co3+L1mL2n]X-k (L1 ammonia and/or n-amine ligand that forms a complex with Co3+; L2 = ligand compd. other than ammonia and/or n-amines; m = 1-6; n = 0-5, X- = counter anion; k = 1-3), a layer contg. a polymerizable compd. and a **photopolymn.** initiator, and a layer contg. a compd. that discolors by ammonia or n-amines (e.g., I, pyrylium dyes) and a precursor that converts to a compd. capable of monoelectron-redn. of the Co complex by heat and/or light [e.g., Y(BR1R2R3R4); Y = cation, R1-4 = alkyl, aryl, aralkyl, alkenyl, alkynyl, heterocyclic, CN]. An imaging method using the material is also claimed, in which energies are applied to them corresponding to image signals followed by heat-treatment. The materials show good storage stability and

provide high-resoln. images with high sensitivity. Thus, a PET support was coated successively with a hexaammine-Co(III) chloride-contg. layer, a layer contg. dipentaerythritol hexaacrylate and 2-mercaptobenzothiazole, a layer contg. o-phthalaldehyde, Li butyltriphenylborate, and diphenylhydantoin, and a protective layer to give an image-forming sheet.

IT **178475-85-9**
(discoloring compd.; image forming materials contg. Co complexes and polymg. compds. for sensitivity and resoln.)

RN 178475-85-9 HCA

CN 1H-Imidazole-4,5-dicarboxaldehyde, 1-benzoyl-2-undecyl- (9CI) (CA INDEX NAME)



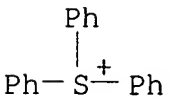
IT **1511-10-0, Triphenylsulfonium** trifluoroacetate
15390-22-4 57840-38-7, Triphenylsulfonium hexafluoroantimonate **120325-33-9**
(**photopolymn.** initiator; image forming materials contg. Co complexes and polymg. compds. for sensitivity and resoln.)

RN 1511-10-0 HCA

CN Sulfonium, triphenyl-, salt with trifluoroacetic acid (1:1) (8CI, 9CI) (CA INDEX NAME)

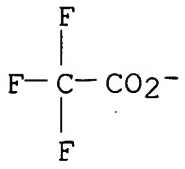
CM 1

CRN 18393-55-0
CMF C18 H15 S



CM 2

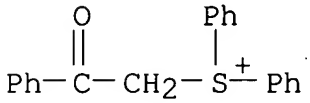
CRN 14477-72-6
CMF C2 F3 O2



RN 15390-22-4 HCA
CN Sulfonium, (2-oxo-2-phenylethyl)diphenyl-, tetrafluoroborate(1-) (9CI) (CA INDEX NAME)

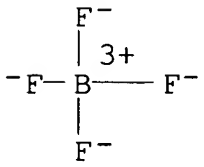
CM 1

CRN 19023-64-4
CMF C20 H17 O S



CM 2

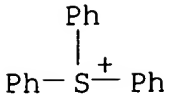
CRN 14874-70-5
CMF B F4
CCI CCS



RN 57840-38-7 HCA
CN Sulfonium, triphenyl-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

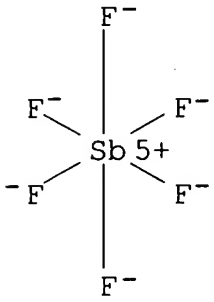
CM 1

CRN 18393-55-0
CMF C18 H15 S



CM 2

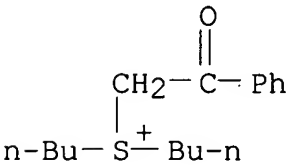
CRN 17111-95-4
CMF F6 Sb
CCI CCS



RN 120325-33-9 HCA
CN Sulfonium, dibutyl(2-oxo-2-phenylethyl)-, (OC-6-11)-hexafluoroantimonate(1-) (9CI) (CA INDEX NAME)

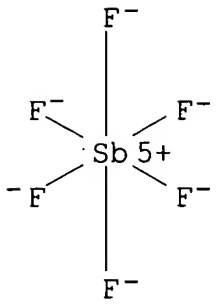
CM 1

CRN 19023-62-2
CMF C16 H25 O S



CM 2

CRN 17111-95-4
CMF F6 Sb
CCI CCS



IC ICM G03C001-67
ICS G03F007-11

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 643-79-8, o-Phthalaldehyde 171102-93-5 178475-84-8 **178475-85-9**
(discoloring compd.; image forming materials contg. Co complexes and polymg. compds. for sensitivity and resoln.)

IT 149-30-4, 2(3H)-Benzothiazolethione **1511-10-0**, **Triphenylsulfonium** trifluoroacetate 6542-67-2 **15390-22-4 57840-38-7**, **Triphenylsulfonium** hexafluoroantimonate **120325-33-9** 141714-63-8
(**photopolymn.** initiator; image forming materials contg. Co complexes and polymg. compds. for sensitivity and resoln.)